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A L L

DRAUGHTSMEN's ASSISTANT;

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O R,

DRAWING MADE EASY:

WHEREIN THE

PRINCIPLES OF THAT ART ARE RENDERED FAMILIAR:

IN TEN INSTRUCTIVE LESSONS.

COMPRISED UNDER THE FOLLOWING HEADS.

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| 1. FEATURES AND LIMES.
2. PROFILES AND OVALS.
3. WHOLE FIGURES.
4. DRAPERY.
5. LIGHT AND SHADE. | 6. LANDSCAPES.
7. PERSPECTIVE.
8. ENLARGING AND CONTRACTING.
9. IMITATION OF LIFE.
10. HISTORY. |
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Explained by a great Variety of EXAMPLES from the most approved Designs on
Copper-plates, neatly engraved :

W I T H

A suitable Introduction on the UTILITY of this Noble ART.

A N D

OBSERVATIONS ON DESIGN, as well in regard to Theory as Practice.

BY THE AUTHOR OF THE ARTIST'S ASSISTANT.

L O N D O N:

Printed for R. SAYER and J. BENNETT, Map and Print-Sellers, (No. 53) Fleet-street.



A KEY TO SARTORIUS

1805 P.D.

T H E

DRAUGHTSMAN's ASSISTANT;

OR,

DRAWING MADE EASY.

I N T R O D U C T I O N.

DR A W I N G is the Representation of any Object either real or imaginary; being the Imitation of Nature or Art, in which by Outlines and Shadows, well executed in their Symmetry, and Proportion, the Copy appears as if it were the real Object.

This useful and entertaining Art improves the Mind, refreshes and supports the Memory; it enables the Artist to form the clearest conception, without which the most laboured Descriptions would be found deficient; and it rescues from Oblivion the Actions and Persons of our Fore-fathers, and preserves their Features and Deeds to future Generations; and retains every uncommon Appearance of Nature.

Nature seems to inculcate a Fondness for Drawing even in Youth, by the Delight they take in Pictures, Prints, &c. which is a kind of universal Language, that speaks to the Eye, and conveys Ideas understood by every Nation and People on the Globe.

The Artist may at Pleasure take Sketches of any Appearances in the Works of Nature or Art, either in his own, or any foreign Country, and bring them home for his future Use or Inspection.—With this Accomplishment the Nobility and Gentry can judge of Designs before executed, and spare themselves the Mortification of Delay, and the additional Expence of future Alterations. In a word, it may be said to be the silent, but the most expressive Language of Nature.

There is no Art or Profession to which Drawing is not useful, but more particularly, the Painter, Carver, Statuary, Engraver, Chaser, Mathematician, Architect, Navigator, Gardener, Weaver, Embroiderer, Whitesmith, and indeed every Workman whose Advantage in Trade may depend on Variety and Beauty; as by the Assistance of it he can lay down his Designs, and improve them to the Fancy and Satisfaction of his Employers.

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It is a Pity so useful a Branch of Education should ever be neglected, as several by excelling in this Art have attained Perfection in their respective Professions and Employments, and have distinguished themselves by Works of Ingenuity, which have met with the Protection and Encouragement of the judicious Part of Mankind. We need not point out the Injury done to Youth by the Neglect of this necessary Study, and how greatly many in Years of Maturity lament the Deficiency of it as a loss to themselves and Families. No wonder it should be deemed one of the chief Accomplishments in human Life, and thought worthy even of Royal Patronage, as well as the honourable Regard paid to it by the different Societies, in all of which a spirited Emulation is excited among the Proficients, by Premiums given to such as produce the most correct and perfect Designs or Imitations.

It has ever been the Misfortune of those who have professed to lay down Rules for the Attainment of any Art or Science, to leave them enveloped with Difficulties, which, if not utterly insuperable, at least discourage the Learner from proceeding in a Study which he can have little Hopes will ever reward his Pursuit.

From hence we may reasonably infer, that the said Professors were totally unacquainted, if not with the Theory, at least with the Practical Part of what they undertook to teach others: and that the Instructions they have given were founded rather upon a bare Supposition of their Efficacy, than upon the surer Basis of long and repeated Experience, which alone could have insured their Success, and from which, with all due Deference to the Judicious (whose Sanction we shall at all Times be ambitious to deserve), we may venture to answser for the Practicability of our own.

To obviate every Objection, and to remove all those Difficulties which had so long blocked up the Path of Science, and retarded, if not wholly impeded the Pupil, in his Progress to the Temple of Fame, was the chief View in compiling the subsequent little Treatise.

Over and above the Improvements made in illustrating the several Arts hitherto so imperfectly and unintelligibly explained, we have introduced Directions for *Scraping* in *Metzotinto*, which, in this Edition, are still farther enlarged, and which, as they have never been before attempted in any Books of this kind, we flatter ourselves will be the more acceptable; especially when it shall appear, from the Rules laid down for the Performance of this Art, that it is so easy to be attained, that a tolerable Proficiency in *Drawing* will enable any one to undertake it with all imaginable Prospect of Success.

The Reader will also find, in this Impression, the Addition of a very useful Problem, in the Article of Perspective, illustrated by a new Plate.

As this Book is chiefly intended for the Use of young Practitioners, we have purposely avoided all abstruse Expressions and obsolete Terms, contenting ourselves with such a familiar Stile as we judged most likely to inform those Minds we would wish to improve: Yet, as the Ideas of an Artist are not wholly to be conveyed without some necessary Terms peculiar to each Branch, we have taken Care to explain such as could not be omitted without a manifest Injury to the Work, by familiar Words of a synonymous Tendency, wherever they occur; so that we apprehend we have not left the least Stumbling-Block for the Reader to encounter.

GENERAL

GENERAL INSTRUCTIONS.

EVERY young Beginner should endeavour to improve his Memory with the Beauties of the most excellent Paintings and Prints, taking Notice of the Harmony of their different Parts, as well as of the Reasons for the Disposition of the Lights and Shades : which will, by Degrees, improve the Ideas to a Degree of Excellency, and make the Practice easy and familiar ; as the hand will be more ready to execute those Objects the Mind has so clearly conceived. The Use of this Accomplishment is visible in many, who, though not able to execute, yet, by accustoming themselves to this Study, become excellent Judges, and are with great Propriety termed *Connoisseurs* in the polite Arts of Painting, Engraving, &c. &c. It will also be of essential Service to the Pupil to attend to the Reasons assigned for the Merits or Defects of the Performance, as such an Enquiry will greatly forward him in his Study.

Pupils should take particular Notice of the Original intended to be drawn from, observing whether the Figures or Objects are upright, or incline to the right or left, taking Care also that every Part in the Copy has the same Direction, which may easily be discovered by frequently revising the Sketch, and comparing it attentively with the Original. Paying a due Observance to this by young Beginners will mend their Judgment, and in Time enable them to proceed with a growing Pleasure.

MATERIALS FOR DRAWING.

Charcoal, cut in long Slips.
Black Lead Pencils.
Crayons of black, white, and red Chalk.
A Porte-Crayon.
Indian Ink.

Camel's Hair-Pencils.
Fitches.
Crow-quill Pens.
A Ruler and a Pair of Compasses.
An Indian Rubber.

INSTRUCTIONS, WITH EXAMPLES.

EVERY Learner is particularly desired to perfect himself in the Practice of the first Lesson, in its several Branches, before he attempts the Second, and so of the Second, before he proceeds with the Third, not endeavouring to become Master of the whole at once, which will only perplex his Ideas, and weary him in the Pursuit of what he will never by this Means be likely to attain ; whereas by proceeding gradually, the Rules will be found much more easy and practicable, and consequently the Study infinitely more pleasing and encouraging.

Drawing

*Drawing the Introductory Lines, with the Features and Limbs
separately.*

ENDEAVOUR to imitate perpendicular or upright Strokes, and then horizontal or parallel Lines, but without using the Ruler; and if Care be taken, few Examples of this Sort will give you Perfection. When you have attained this, proceed to the curved and twining Lines, observing carefully their different Inclinations. And when you can with Ease perform these, proceed to draw the Out lines of a Human Face, as the Eyes, Nose, Mouth and Ears; and from them proceed to the Parts of the Body, as the Arms, Hands, Legs, &c. See Plate I.

N. B. The above must be but faintly sketched, so as to be easily taken down with a Rubber, in order to make the necessary Alterations before finishing.

Profiles and Ovals.

WHEN you are become Master of the former, you may then attempt the Profile or Side face, being careful to observe the Proportion of the several Parts to each other; after this the Full or Oval Face, observing still the Bearings of every Feature with respect to the rest, and keeping the Proportions as exact as possible. After proceeding with great Care in the above, you may begin the Out-line of the Body as in Plate II.

Whole Figures, with the Proportions and Dimensions of the Human Body.

IF on thorough Examination you find you can easily imitate the different Features, and Parts of the Body, you may begin the whole Figure by sketching the whole *very lightly* with your Pencil or Charcoal, examining the Proportion of the different Parts, taking it down with a Rubber, and altering where it shall appear necessary. When you have brought it as near as possible to your Original, proceed to finish with the Crow-quill Pen and Indian Ink, beginning with the Head, then proceeding to the Shoulders, Body, Arms, Hands, Hips, Legs and Feet, taking Care to correct any Errors in the Pencil Sketch, the Remains of which will be easily erased with a Rubber.

N. B. Refrain from the Use of Compasses till after a very minute Inspection with the Eye, and then, if the Fault cannot be discovered, a proper Application of them will greatly assist the Pupil to remedy the Defect. Having by close Attention and Practice improved his Ideas so far as to be able to compleat a Figure in Out-lines, we shall proceed to instruct him in the Drapery or Cloathing; but before we quit this Subject it will be necessary in this Place to give him

THE best Method of ascertaining the Proportions and Dimensions of the several Parts of the Human Body, by raising a Perpendicular on the Place you intend for the Middle of the Figure, and divide it into Heads, and from such form a Scale, to regulate the proper Distances: but as it has been common to divide the Figure into ten Parts, we have (though we do not so well approve of this Method) given an Example of both of these Methods, together with Rules for the Illustration of each respectively.

The

*The Proportion of a Figure divided into Eight Heads.
See Plate III.*

THE Length of the Head, is from the Crown of the Head to the Bottom of the Chin.

A Line ruled through the Second Division will directly cross the Paps of the Breasts. The Third Division will fall near the Naval.

The Fourth across the Privities, which is exactly the Middle of the Figure.

The Fifth crosses the Middle of the Thigh.

The Sixth is just below the Bend of the Knee.

The Seventh falls a little below the Calf of the Leg.

The Eight extends to the Bottom of the Heel.

Observe that when the Arms are extended at full Length in a direct Line, the full Extent from the Middle Fingers of each Hand is exactly the Length of the Figure; from the Middle of the Collar Bone to the End of the Middle Finger measures four Heads, viz. The First to the Bend of the Shoulder, the Second to the Elbow, the Third to the Wrist, and the Fourth to the Fingers Ends.

From Shoulder to Shoulder in a Man of common Size, measures exactly two Heads; but there is no precise Standard for the Breadth of the Limbs, which vary according to the Bulk of the Person, and the Movement of the Muscles.

The Proportion of a Figure divided into Ten Parts. See Plate III.

THE First of these Divisions extends from the Crown of the Head to the under Lip.

The Second a little below the Collar Bone, and a Line drawn through this Part of the Figure, will Pass over the Middle of the Shoulders.

The Third Division will make a Line just below the Paps of the Breast.

The Fourth will reach just below the Navel.

The Fifth, which is the Middle of the Figure, directly across the Privities.

The Sixth will pass over the Middle of the Thighs.

The Seventh crosses the Bend of the Knee.

The Eight directly through the Calves of the Legs.

The Ninth reaches half Way from the Calf, to the Bottom of the Heel, which determines the Tenth and last Division of the Figure.

The young Beginner will find the foregoing Rules of infinite Advantage, to which we would advise him to give due Application till they become strongly impressed on his Mind; but Care must be taken that too strict an Observance of the preceding Dimensions may not destroy that Variety of Compositions so absolutely necessary; nor will the Preservation of the same Proportion be always allowed in the Subject, which Mr. Hogarth, in his Chapter of Proportion, very judiciously remarks in his Observations upon the celebrated Statue of *Apollo Belvidere*, where he says, I cannot throw a stronger Light on what has been said hitherto of Proportion, than by animadverting on a remarkable Beauty in the *Apollo Belvidere*, which hath given it the Preference even to the *Antinous*; I mean a Super-addition of Greatness to at least as much Beauty and Grace as is found in the latter.

In the same Apartment at Rome are to be seen these two Master-pieces of Art, where in viewing the *Antinous* the Spectator is filled with Admiration; when the *Apollo* strikes him with Surprise; and, as Travellers express themselves, with an Appearance of something more than human, which they are always at a Loss to describe; but the Effect of this is, they say, the more extraordinary, as the Disproportion upon Examination is evident to every common Eye.

Anatomy the Foundation of Design.

ANATOMY is a perfect Knowledge of all the Parts of the Human Body; but no more is necessary to Painters than that which relates to the Bones, and the principle Muscles that cover them.

There is an absolute Necessity to be thoroughly acquainted with the Forms and Joints of the Bones, because the Dimensions are often altered by Motion; and likewise to understand the Office and Situation of the Muscles, since the most striking Truth in Design depends upon them.

As it is indispensably necessary that the Pupil should have some Knowledge in Anatomy, it being the fundamental Part of Design, and enables Artists to discover the Beauties of the Antique; it is) therefore earnestly recommended the Student to pay some Attention to it, as all that is necessary for Draughtsmen is very easily retained.

Of Drapery.

WHEN you have drawn the Out-lines of the Figure you want to cloath, faintly with Charcoal, sketch the Out-lines of your Drapery lightly, with the several Folds, remembering that they must not cross each other. Due Regard must likewise be had to the Quality of the Drapery; as Stuffs and Woollen Cloth are more harsh than Silk, which is always flowing and easy. Remember that the Drapery must not stick too close to the Body, but let it seem to flow easy about it, and yet appear so that the Motion of the Figure be free and natural. Be careful that the Drapery supposed to be blown by a Breeze of Wind all flow one Way, and draw the Parts next the Body before those which fly off. The Garments must always bend with the Figure, and if you make the Drapery almost close to the Body the smaller must be the Folds, and if quite close there must be no Folds, but only a faint Shadow, to represent the Bend of that Part of the Body which it covers. It is necessary the Student should take every Opportunity of Improvement in this useful Branch, by remarking the Folds in the Drapery of Gentlemen and Ladies, according to their several Positions: By this unerring Rule of Nature, the Learner will greatly heighten his own Ideas, and give a superior excellence to his Work.

Thus far may serve to give the young Draughtsman a general Idea of Drapery, but that he may not be at a Loss in perfecting himself in this necessary Branch of the Art, we have here subjoined the following more particular Instructions, viz.

1. Be careful to avoid overcharging your Figure with a Superfluity of Drapery.
2. Let as much of the Form of the Body as possible be shewn underneath it.
3. When the Draperies are large throw them into as few Folds as you can, and let these be large and graceful.

4. On the contrary, let those which are close to the Body and short, be loosened by small Folds judiciously placed, which will be the means of avoiding that Stiffness, which for want of this Caution appears, when the Drapery is made to fit too strait, and makes the Figure seem as if wrapped round with a Bandage, instead of being gracefully cloathed.

5. When much Drapery is required, let the greater Part (if possible) be thrown into Shadow.

6. Observe that the Folds which fall in the Light must have such soft and tender Shadows, as may make them fit hollow from the Body, and not seem to girt too closely to it.

7. Let the Folds be properly contrasted, and avoid strait Lines as much as possible.

8. A judicious Repetition of Folds in a circular Form greatly contribute to characterise a fore-shortened Limb.

9. In fixed Attitudes let the Drapery appear likewise motionless (unless exposed to the Air). But the Drapery of Figures moving with great Agility, should seem to play as if agitated by the Wind, but in Proportion only to the Velocity of the Figures in Motion.

We cannot conclude this Subject without giving this very useful Caution, viz. Let the Pupil be careful how he studies Statues, and remember that the best of them are only Memorials of those great Artists, whose Lives were spent in endeavouring to express their own Idea of Perfection, which varied according to the different Taste of each, and the Nature of the Materials upon which they wrought: and let it be likewise remembered, that there is a Stiffness (which should be studiously avoided) in a Copy (even though a correct one) made after the finest Statue, which will never convey any Idea but that of a Statue; whereas there is such a Freedom observable in the Imitations of Nature, as evidently distinguishes them from those taken either from Marble or Plaster.

Of Light and Shade.

THE proper Distribution of Light and Shade in a Picture is absolutely necessary to be known; as it not only determines the proper Distance of one Object from another, without which the Whole would be an undistinguished Mass of Confusion, but it gives likewise to each respective Object its Substance, Roundness and Effect.

Therefore, having out-lined the Folds, and the other Parts of Drapery, you may next attempt the Shadowing of your Figure, observing the following Method:

Shadow the Drawing with the Pencil or Pen; in which great Care is required. First, observe from which Side the Light comes in, which if natural ought to be from the Right or Left; for when the Light comes in the Middle, it is called an artificial Light, as proceeding from some artificial Luminary, as a Candle, Lamp, &c. &c. Lay your Shades rather faint at first, so that you may heighten them at Pleasure where necessary; for you may at any Time darken your Shadows, when you cannot lighten them.

Remember that your Shades must be all on the same Side of the Figure, that is to say, if the Right Side of the Face be in Shade, so must the same Side of the Body, Arm, Leg, &c. Your Shades must all be faint as they approach the Light, the Strength gradually decreasing towards the Extremities, to prevent a harsh Appearance, as that is a never-failing Sign of a bad Workman.

When

When one Part of the Body projects over or before another, the Part projecting must receive a stronger Light: Those Parts that bend inward must be made so much the darker, and shadowed deepest next the Light.

Two equal Lights must never be made in the same Picture: The strongest Light should fall upon the Middle of the Piece (where the principal Figures ought to stand), diminishing gradually towards the Extremities.

A Stump made of Paper or Glove-leather rolled hard, and cut almost to a Point like a Pencil, is useful (if you shade with the Pencil, Red Chalk, or Crayons) to blend the Shades, and soften them into each other; as also, where they appear too strong, to weaken them with the aforesaid Roll. By examining Nature you will improve your Ideas in Light and Shade, as well as in Out-lines, and be enabled to form a right Judgment of the Truth of your Drawing.

N. B. The Indian Ink may be prepared for a few different Shades by rubbing it more or less in Water on a Marble Stone cut in Hollows, for that Purpose, reserving one of the Hollows for the Water.

Of Drawing Landscapes, &c.

THIS will give the Student an inexhaustible Fund of Amusement, from the Variety of Subjects which Nature constantly supplies for his Observance and Imitation. And in order to improve in this Study, the best Method is to adhere to the Rules before laid down with regard to the Human Body, by beginning with the most simple Objects, as the Out-lines of Cottages, Trees, &c. for which Reason we shall give a few Examples in each, with their proper Shades; but would advise the Pupil not to be too hasty in the Shadowing before he is perfect in the Out-line; and, as it is impossible he should excel in Landscape without some Knowledge of Perspective, we shall give some Directions, suitably illustrated with Problems, as a necessary Assistant to the Practitioner, which will prevent his being imposed on by faulty and incorrect Originals, where the Ignorance of Perspective makes the whole Landscape appear unnatural and distorted.

Of Perspective.

THE first thing necessary to learn before we proceed to the Problems, is an Explanation of the several technical Terms used in the Practice of this Art; and these are as follow:

The *Base* or *Fundamental Line* is the Bottom of the Drawing, or that Part of the Ground on which the Person is supposed to stand, looking towards the Point of Sight.

A *Perpendicular* is an upright Line with respect to any Part of the Base.

Parallel Lines are equidistant from each other, as the *Horizon* to the *Base*.

The *Horizon* is the most distant Part where the Clouds seem to touch the Earth, and Limits the Sight.

The *Point of Sight* is that Part of the Horizon where all the Visual Rays center.

Visual Rays are Beams of Light conveying the Likeness of any Thing to the Sight, and the Knowledge thereof to the Mind.

Points

Points of Distance are set off on the Horizontal Line, at equal Distances on each Side of the Point of Sight.

Diagonal Lines are those drawn from the Points of Distance to the End of the Base Line.

The *Abridgment of the Square* is the Line where the Diagonals cross the Visual Rays, and must always be parallel to the Base ; this is only of Use when the Sight is limited by a Perpendicular, as the End of a Church or Room.

The foregoing Terms are illustrated in Plate IV. Fig. I.

The *Point of direct View* is when the Object is seen in Front, as a House, &c. or a Geometrical Elevation raised from a Ground-plot, comprehending an equal Space on both Sides the Point of Sight.

The *Point of Oblique View* is when the Object is seen sideways ; for Instance, a View of a Canal with some remarkable Buildings, when the Person drawing the said View is placed on the Base Line opposite to the Buildings, so that the Ray of Light may be more oblique, and the Buildings less fore-shortened, and appear to greater Advantage.

Accidental Points are those where Objects End in the Horizontal Line, not in the Points of Sight or Distance, serving for Streets, Houses, Chairs, &c. taking different Directions.

Ichnography is a Plan or Ground-plot to be raised in Perspective.

Scenography is bringing any Thing raised in Perspective from an Ichnographic Plan to its proper Proportion, that all Objects may be diminished in a Picture the same as in Nature.

As the Art of Perspective is constructed on Geometrical Principles, it may be necessary, previous to the Rules themselves, to demonstrate the following introductory Operations :

1. From a Point in a given Line 1—2 to raise a Perpendicular. See Fig. II.
Plate IV.

Draw the given Line 1—2, then set one Foot of the Compasses in 2, and extending them to rather more than half the Length of the Line 1—2, strike the Arch 3, 4. and with the same Extent of the Compasses set one Point in 3, and describe the Arch 5, 6. and then, without altering the Compasses, set one Foot in 7, and sweep the Arch 8, 9. Next rule through the Points 3, 7. to intersect the Arch 8, 9. at 10; and draw the Line from 10 to 2, which is the Perpendicular required.

2. To raise a Perpendicular upon A, it being the Center of the given Line A. B.
See Fig. III. Plate IV.

Divide the Base Line B C into two equal Parts, then extend the Compasses to any Distance greater than A B or A C, and with one Foot in B sweep the Arch d e, then with the same Extent of Compasses set one Foot in C, and sweep the Arch f g, and from the Interfection of the two Arches at h draw a Line to the Center of the Base Line at A, and you have the Perpendicular required.

D

3. To

3. To draw a Line parallel to, or equidistant from, another given Line E. F.
See Fig. IV. Plate IV.

Extend the Compasses to the Distance of the parallel required, then with one Foot in any Point of the Line given, as in G, sweep the Circle H. I. Again, without altering the Compasses, set one Foot in another Point, as in K. and describe the Circle L. M. then rule the Line T. C. touching the outward Parts of the two Circles, and you will then have the Parallel to the Line given.

4. To bisect or divide a given Line, C. D. into two equal Parts. See Fig. V. Plate IV.

Having taken with your Compasses any Distance greater than half the given Line, proceed with one Foot of them in C, to describe the Arch E. E. and without altering the Distance, setting one Foot in D, sweep the Arch F. F. and these Arches will intersect each other in the Points I. K. which joined by a Perpendicular will cross C. D. in the middle Point L.

5. Having three given Points not in a right Line, how to turn a Circle through them. See Fig. VI. Plate IV.

Three Points being fixed as at D. E. and F. proceed to join them by the right Lines D. E. and E. F. then by Fig. V. bisect the Line D. E. with the Line G. H. which being done, divide the Line E. F. with the Line I. K. and from the Middle K. where these Lines center, extend your Compasses to D. and sweep the Arch D. E. F. P.

6. A fure Way of drawing an Oval. See Fig. VII. Plate IV.

Divide the given Line G. H. into four equal Parts; one Foot of the Compasses being set in I. describe a Circle E. E. Without altering the Extent of the Compasses from K. sweep the Circle F. F. then extend the Compasses, one Foot in K, and sweep the Arch L. L. With the same Extent set one Foot in I. and turn the Arch M. M. the Intersections must be united by a Perpendicular from N. to O. then proceed, with one Foot of the Compasses in N. to describe the Arch P. P. and with the same Extent of Compasses set one Foot in O. and turn the Arch T. T.

7. Another certain Method. See Fig. VIII. Plate IV.

Rule a given Line A. L. then place one Foot of the Compasses in C. and describe the Circle F. F. then with the fame Extent of Compasses on the Line A. L. in the supposed Point O. describe the Circle P. P. and through the Points Q. Q. where the two Circles intersect, rule the perpendicular K. T. then, having one Foot of the Compasses set in K. extend the other so as to sweep the Arch B. B. to the lower Extremities of the Circles; then, without altering the Compasses, set one Foot in T, and turn the Arch U. U. to join the upper Extremities.

By the preceding Examples it is evident that an Oval of any Form or Size may be constructed at Pleasure, only observing always to set the Compasses at an equal Distance from the given Line A. L. on the Perpendicular K. T.

Practical

Practical Examples in Perspective.

To draw a Square Pavement in Perspective. See Fig. IX. Plate IV.

SUPPOSING you have a Piece of Pavement consisting of 64 Pieces of Marble, each a Foot Square, your first Business is to draw an Ichnographical Plan, which is thus performed:

An exact Square being made to the Size of your intended Plan, proceed to divide both Horizon and Base into eight equal Parts, and from each Division in the Base to its opposite Point in the Horizon rule perpendicular Lines, and divide the Sides into the same Number, ruling across from Point to Point parallel Lines; so that of Course your Pavement will be divided into 64 Square Feet; as the Eight Feet in Length, being multiplied by the Eight in Breadth, produce the Number of Pieces contained in the Whole: then rule from Corner to Corner Diagonal Lines, and you will have your Ground-plot as in the same Figure.

Now, to throw this into Perspective, draw another Square as before directed, and divide the Base Line only into eight equal Parts; fix your Point of Sight at F. in the Center of the Horizon G. H.; then to every Division in the Base D. E. rule Lines from the same Point; and proceed to rule Diagonals from D. to H, and from G. to E, to answer those in the Ground-plot, and you will then have your Square reduced to the Triangle D. E. F. and from the Point I. where the Line D. F. is intersected by the Diagonal G. E. to the opposite Intersection K. where the Line E. F. is intersected by the Diagonal D. H.; then rule a parallel Line, which is the Abridgment of the Square.

From the rest of the Lines which go from the Base to the Point of Sight, through the Points which are intersected by the Diagonals, rule parallel Lines, and you will then have your Square Pavement laid in true Perspective, as in Fig. X. Plate IV.

To find the Height and Proportion of Objects appearing above the Horizon on a supposed Plane. See Fig. XI. Plate IV.

Having your horizontal Line ruled A. B. proceed with fixing your Point of Sight as at N, and marking the Place of your nearest Pillar by a Dot at the Summit or Top as at C, and another at the Base as at D. Then rule a Line from C. to N. and another from D. to N. and these two Lines give the Height of any Number of Pillars: for instance, would you have your Pillar at E, fix your Dot for the Base, then meet the Diagonal D. N. at F, by ruling a parallel Line, and to the Diagonal C. N. rule the Perpendicular F. G, which Perpendicular shews the Height of the Pillar required at E. Or, would you have a Pillar placed at H, observe the foregoing Directions; ruling the Parallels H. I. and K. L, and the Perpendiculars I. M. and L. O, will shew the required Heights and Distances.

In finding the Diameter at any particular Distances, you are to be guided by that nearest the Base; as, for Example, suppose your nearest Pillar D. R. to be ten Feet in Height and one in Diameter, intersect from Bottom to Top in two equal Parts, and upon the Base of the Pillar set off one of them from the Point of Sight N. to the Diameter R. then Rule a Line to the Point of Sight from R, and you will have on the respective Basis the Thickness of each Pillar.

The

The preceding Rule exemplified in Objects beneath the Horizon. See Fig. XII. Plate IV.

Having ruled the Horizontal Line A. B, fix the Point of Sight as at C; then, according to your Judgment, make a Dot for the Feet of your Figure as at D, and another for the Head as at E; then rule a line from C. to D, and from C. to E, and these two Diagonals will shew the true Height of any Number of Figures that can be wanted. Make Dots for the Place of the Feet of any Figure where you would have them stand, as at F, G, H, I, and K: now to know the Height of each respectively, draw parallel Lines from the Dots F, G, H, I, and K, to the Diagonal C D; then raise Perpendiculars from the Points where the Parallels intersect this Diagonal at L Q, M R, N S, O T, and P U, and the Perpendicular L Q shews the Height of the Figure at F, as does M R of that at G, N S of that at H, O T of that at I, and P U of that at K.

Note, You will be obliged always to fix the Height of one Figure as at D E, in order to find the Size of the rest; and the Point of Sight may be placed at any Distance you please from the first supposed Figure on the Horizontal Line.

From a Line given to form a Square. See Fig. XIII. Plate IV.

Rule your Base Line of any Length you please, as at A B; then raise Perpendiculars (as in Fig. II.) from A to C, and from B to D; next take with your Compasses the Length from A to B, and setting one Foot in A, turn the Arch E F; then with the same Extent of Compasses set one Foot in B, and describe the Arch G H; lastly, rule a Line from I to K, touching the outward Parts of the two Arches where they intersect the Perpendiculars, and you have the Square required.

From a given Line to form a Parallelogram. See Fig. XIV. Plate IV.

Rule a given Line of the Length required, as at A B; then raise a Perpendicular at A, and another at B, as in Fig. II.) and on them set off the proper Heights, as A C and B D; join C D with a Line, and your Parallelogram is complete.

F I G. XV. Plate IV.

In this Figure we have attempted to shew how to draw, with Certainty, that curved Line, which Mr. Hogarth, in his ingenious *Analysis* has stiled the *Line of Beauty*. There has, however, been an Objection raised by some, that he has omitted the Rule whereby this *truly useful Line* may be found: For which Reason, and in order to enforce the Study of it, we have given this Figure, not as an Insult upon that celebrated Author (whose Meaning is very clear), but as a Line well deserving of Attention, being of itself single and easily drawn; and as we are desirous of following the Method of that great Artist, in the Explanation of our Ideas by the most familiar Objects, we here inform the Student, that it may be plainly seen in that well-known Amusement of the School-Boy, a six-pointed Star; in which the contrasted Halves of any two opposite Points give the Line which is with great Propriety stiled the *Line of Beauty*.

To

To execute a Direct View. See Fig. I. Plate V.

If you would draw a Direct View of a House and Wall, or, in other Words, a Geometrical Elevation to be raised from a Plan or Ground-plot, by a Scale, made according to the Dimensions of the Building, first rule the Base Line A A above the Plan B B at any Height you please. Then erect Perpendiculars at C and D for the Extremities of the House, also from the Windows marked in the Plan e f, g h, i k, l m, n o, which will give the Breadth of all the Windows. Rule these Perpendiculars faintly with Black Lead. Having done this, suppose the Bottom of the Parlour or Ground-Floor Windows to be 3 Feet above the Base Line A A, take off with your Compasses 3 Feet from the Scale, and transfer that Measure from p to q at each End of the House. Then supposing the Parlour Windows to be $5\frac{1}{2}$ Feet high, set off that Measure from the Scale, and transfer it to the Extremities from q to r. Then, if the Distance from the Top of the Parlour Windows to the Bottom of those on the First Floor be 5 Feet, take it as before from the Scale, and set it off at each End from r to s. Then suppose the Chamber Windows to be $5\frac{1}{2}$ Feet high, transfer that Distance from the Scale from s to t at each End. Next, supposing from the Top of the First Floor or Chamber Windows to the Bottom of the Cornice to be 3 Feet, take 3 Feet from the Scale as before, and set off that Distance at each End from t to u. Then if the Cornice be $1\frac{1}{2}$ Foot high, measure it off from the Scale, and transfer it to each End from u to w. Lastly, suppose the Roof to be 3 Feet from the Top of the Cornice, set off 3 Feet at each End from w to x, then rule faintly with your Pencil the Parallels q q, r r, s s, t t, u u, w w, x x, and you have the Height and Breadth of all the Windows, &c. which having outlined, rub out the Parallels and Perpendiculars with Bread; and setting off 6 Feet, the supposed Height of the Wall, rule the Line from A to Y at each End, and the Work is ready for shading.

To draw an Oblique View. See Fig. II. Plate V.

First Rule the Horizontal Line D E, and if the most remarkable Objects be on the Left-Hand, as at C, having taken your Station on the Base Line as at G, from that Place raise a Perpendicular G I, which at the Point of Sight K will intersect the Horizon; and to find the Roof and Base of the principal Building C, rule the Diagonals L K and M K.

N. B. Observe whether the Prospect before you make a Curve, which if it should, be careful to make the same in your Copy, whether it be direct or oblique.

To draw a View wherein are Accidental Points. See Fig. III. Plate V.

Suppose a large Building in which are seen two Fronts taking different Directions, as in this View: fix your Station at A about the Center of the Base Line, after which rule the Horizontal Line B C, then fix upon that your Points of Sight D and E; and rule first the Diagonals E H and E I, and you may draw Diagonals from the Point of Sight D to F, G, and K, &c. that they may take their proper Directions towards their respective Points of Sight.

Accidental Points seldom intervene where there is but a small Distance, as in Canals, Groves, Noblemen's Seats, &c. which are to be drawn by the strictest Rules of Perspective

spective. But when the Prospect is extensive, it must include every Thing analogous thereto; but as this requires such an infinite Number of Accidental Points, you had better not attempt them till your ideas are farther improved, and your Judgment more strengthened.

Of Enlarging and Contracting. Fig. IV. and V. Plate V.

WITH your Compasses divide your Original into any Number of Squares, and with your Pencil Rule from Side to Side, and from Top to Bottom; then divide your Paper into the same Number of Squares bigger or less than the Original you intend to enlarge or contract: and you may, to prevent Mistakes, number the Squares both in the Original and Copy, as they are done in the Plate. This done, place your Original before you, and draw Square by Square, that is to say, make the same Parts as are contained in one Square of your Original fall into the same Square of your intended Copy; and by doing this with Care, you will make the one exactly correspond with the other in due Symmetry and Proportion. Then outline your Subject with Indian Ink, and rub out the Marks of the Pencil with Bread, and so proceed to shading.

Of Copying of Draughts.

WHEN you would copy a print or drawing exactly of the same Size, rub the Back of it with the Dust of Red Chalk or Black Lead; lay this upon your Paper, and pin it down at the four Corners; then with a blunt Point trace the Outlines and Breadths of the Shadows; which done, having carefully examined it to see that nothing be omitted, take it off, and finish it with the Pencil or Pen.

Another way to make an exact Copy, and at the same Time to preserve the Original, is, to lay a Piece of transparent Paper upon it, and draw the Outlines thereon with a Black Lead Pencil; then between that and the Paper you intend to draw upon, place a Piece of thin Post-Paper, reddened or blackened at the Back; after which, proceed to trace and finish it according to the foregoing Rule.

If you would reverse your Original, you need only turn the transparent Paper, with the Drawing you have made upon it, downwards upon the Post-Paper, and trace it as above directed.

Of the Imitation of Life.

CHUSE the Person you are to draw from, to be of an handsome Shape and good Proportion, as this will confirm your Ideas, and illustrate the Rules before-mentioned.

Place the Person in the most natural and easy Position, always avoiding, in your early Practice, the copying of ungraceful or distorted Attitudes, which serve only to give

give the young Practitioner a wrong Bias, and render him incapable of forming a just and proper Conception of the natural Beauties and Graces of the Human Form.

Begin as before directed with a slight Sketch with your Charcoal of the main leading Strokes or Outlines, which having done correctly, proceed to finish with your Pencil.

Take particular Notice of the Muscles as they occur; as this will give a Resemblance of the Person in the Outline, if correctly observed, before you shadow it.

In drawing a Likeness, great Care is necessary to express the Passions in the liveliest Manner, and this is done by minding the Disposition of every Feature, with peculiar Nicety. This being by far the most difficult Part the Pupil has to learn, we would advise him not to be too hasty to attain it before he has made a thorough Proficiency in the easier and more practicable Branches of Drawing; nor would we, on the other Hand, discourage the Efforts of Genius, which in the Pursuit of any Art or Science, are most certainly truly laudable, and have been frequently attended with the deserved Success: all that we mean to inculcate by this Caution, is not to aspire all at once, or by too hasty Strides, to Perfection, but rather to ascend progressively the necessary Steps which lead towards it.

Of History.

THE Student has in this Branch the whole Art of Drawing, as it were, blended together; and when he has so far gained his Point, as to draw completely the Human Body, this will be the most delightful Employment that can be imagined. For the Choice of Subjects he need never be at a Loss, as his own or his Neighbour's Families will furnish him with Abundance. Books will likewise greatly assist him, particularly the Sacred History, which is replete with an inexhaustible Fund of Events, above all others worthy to be recorded, and therefore most deserving his serious Attention. To this we may add the History of our own Country, wherein the illustrious Actions of ancient Heroes, as well as those of our Contemporaries, and particularly our gallant Officers Military and Naval in the last War, afford ample Matter for the Exercise of the ingenious Artist. As to Beasts, Birds, Flowers, Fruits, Plants, &c. we think it wholly unnecessary to give any Directions concerning them, as the Subjects we have already discussed are by far the most useful, and he who can draw a human Figure correctly, is sufficiently qualified for every other Branch of this noble Art; but as the experienced Draughtsman may sometimes choose to vary the Object of his Study, which, when perfect in Anatomical Subjects, he may do with Safety, we have given a few Examples of Beasts, Birds, Shipping, &c. for his farther Entertainment and Amusement.

Observations

Observations on Design, as well in Regard to Theory as Practice.

THE Theory of Design is only to be acquired by studying the best Authors who have laid down the scientifical Rules for the Attainment of this Art. By a sound Knowledge in the Theory of Design, those who are unable to draw the most simple Objects may be enabled to give their Opinion upon the Performances of the best Masters; in this Case, Theory being detached from Practice, is equally considered, and distinguished by the Epithet of Taste. There is another Method of acquiring Taste; which is by frequently examining good Pictures, in the Presence of those who are esteemed Connoisseurs in the Art, who generally pass their Judgment without Reserve.

Theory, in this Sense of the Word, has been hitherto the greatest Support of Painting; for had Taste been confined to Practice only, we should not be able to find so many invaluable Pieces in the Cabinets of Princes and other Encouragers of Art, and who could not perhaps have been permitted by their Avocations to have acquired any Taste for this polite Art, so that Painting of Course would have found no Patronage.

The practical Part of Design is produced only by a frequent Application of the Hand, accompanied with the Understanding, in the Imitation of various Forms.

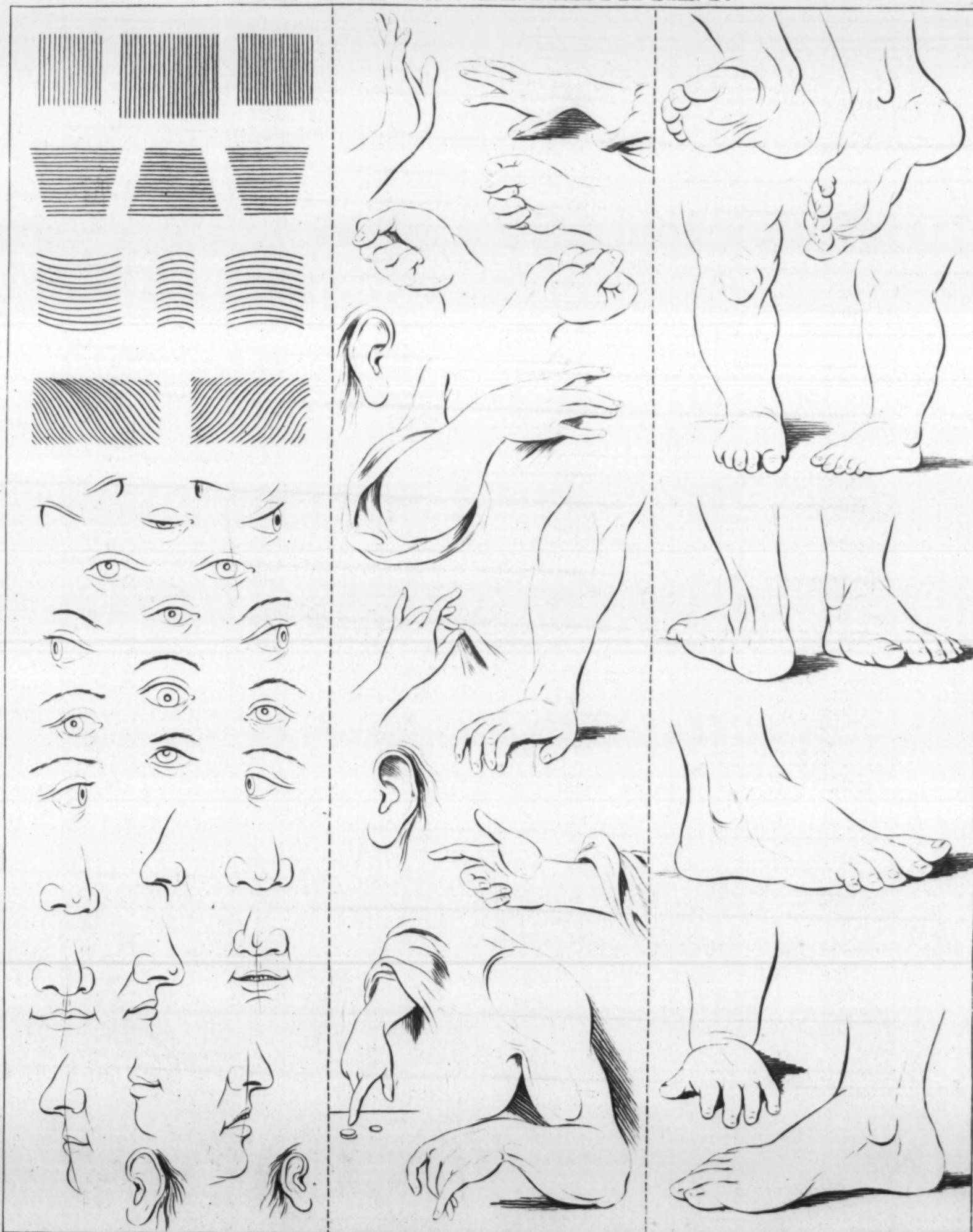
Those Objects, whether Persons or Places, which we have but a transient View of, are in the Memory like Sketches of Charcoal upon Paper, which the Whisking of a Feather will entirely deface. How then shall the unaccustomed Hand perform its Function when the Object is not inculcated in the Mind, and can in a short Time retain only a confused Idea of its Resemblance? This is therefore an infallible Proof that the only Way to attain Perfection is to blend Practice with Theory.

From what has been already said, it is plain that the Conveyance of the Similitude of Objects is only to be obtained by an unwearied Application. The Hand by Practice acquires a Facility which gives Freedom, and we must correct that Freedom by Judgment. Please to observe, that we do not here mean by Judgment but Exertion of the Understanding that is necessary to compose an historical Picture, but relates only to Proportion, it being nothing uncommon for one who is a good practical Draughtsman to be entirely incapable of composing, which we think should be with the utmost Propriety ascribed to the Genius.

T H E E N D.

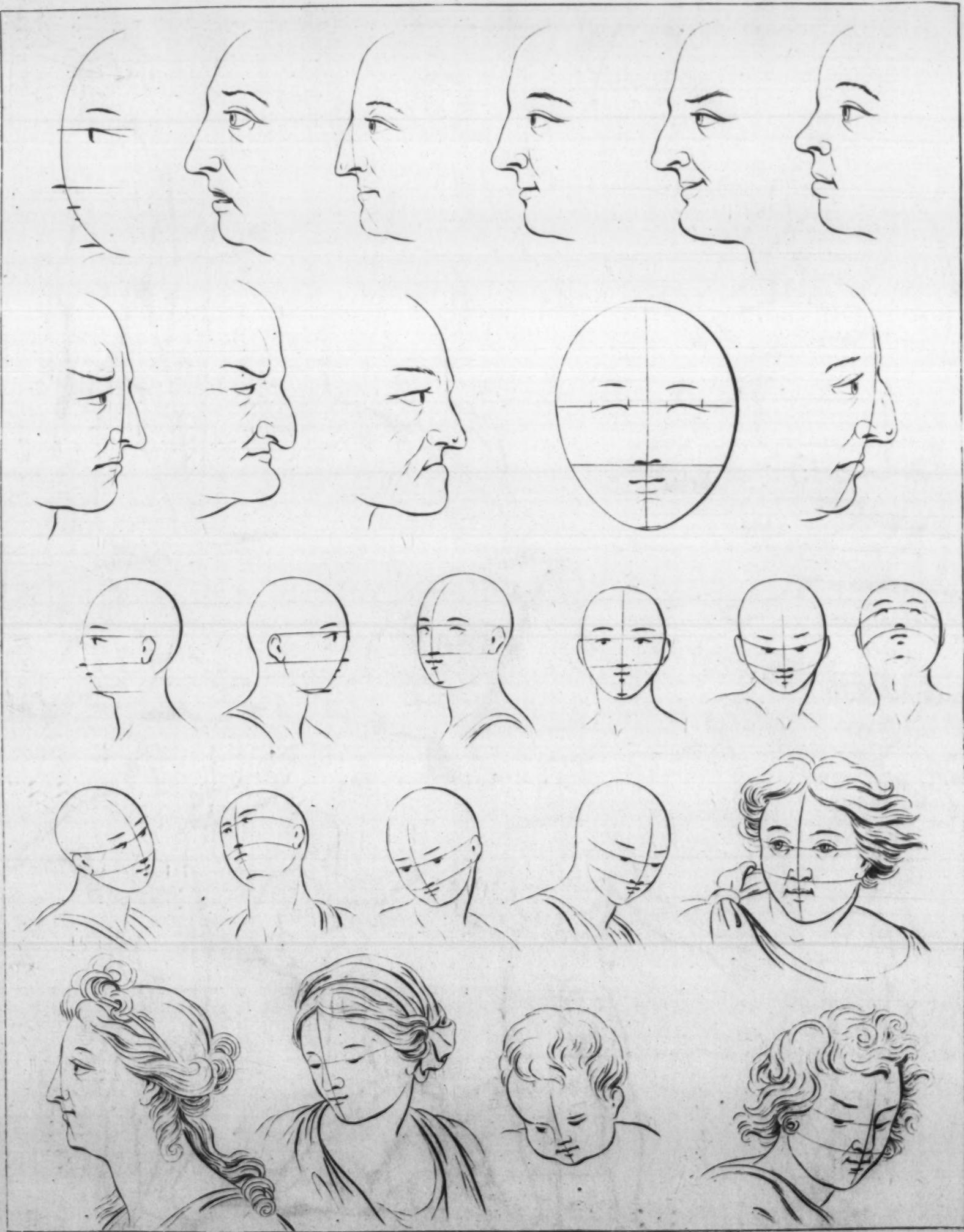


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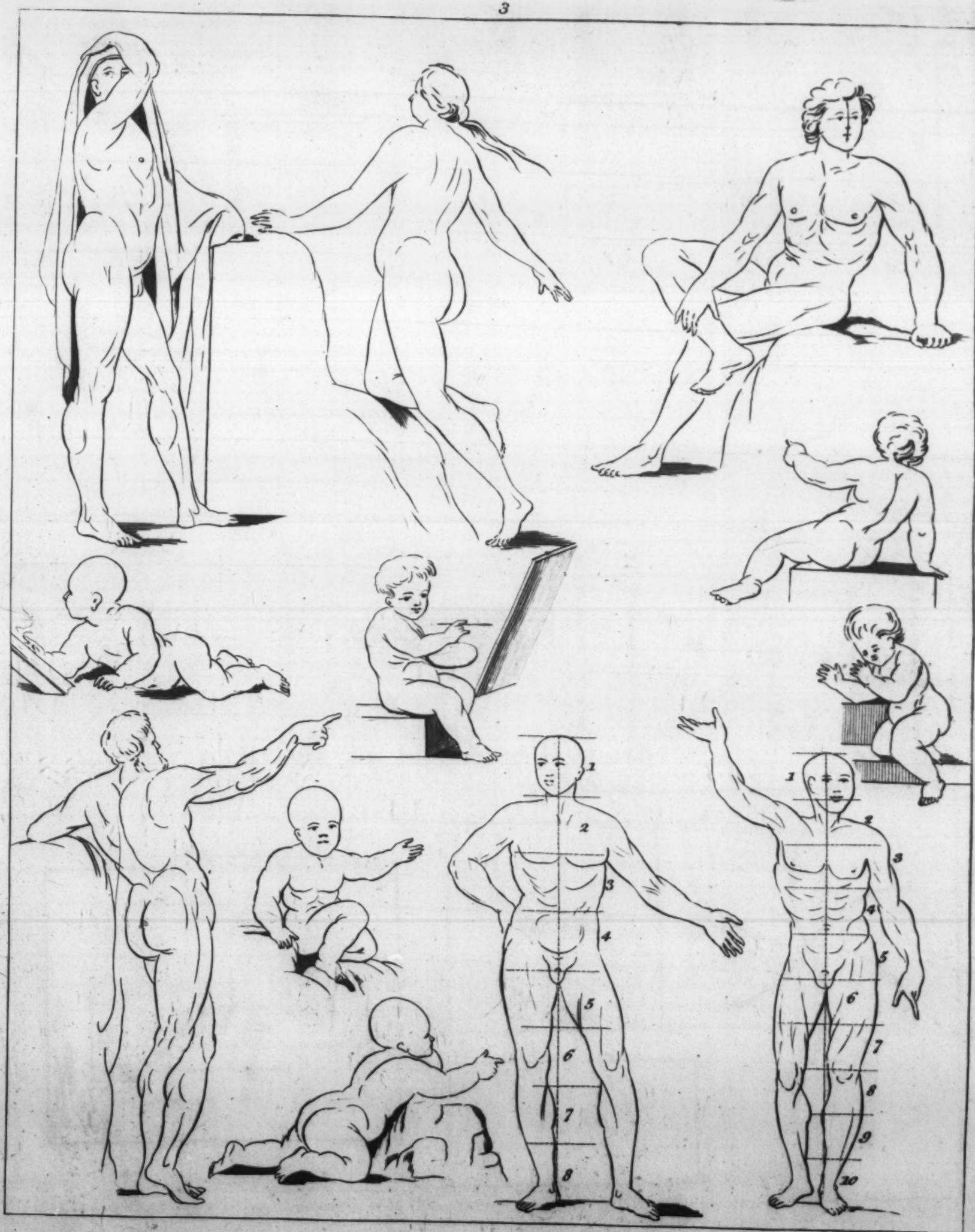


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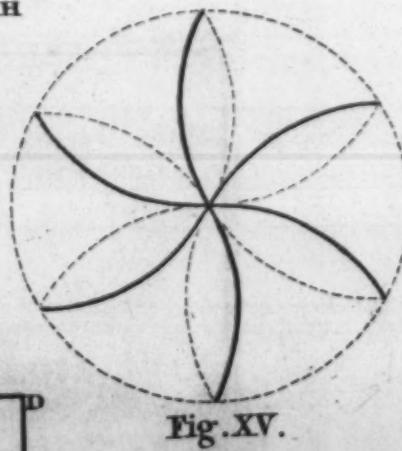
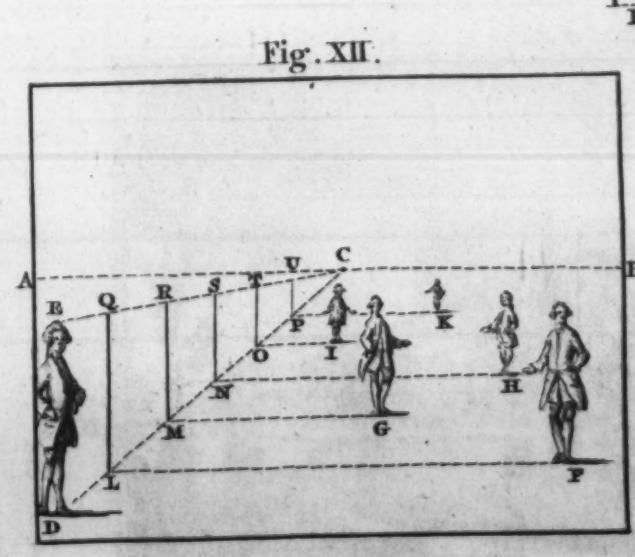
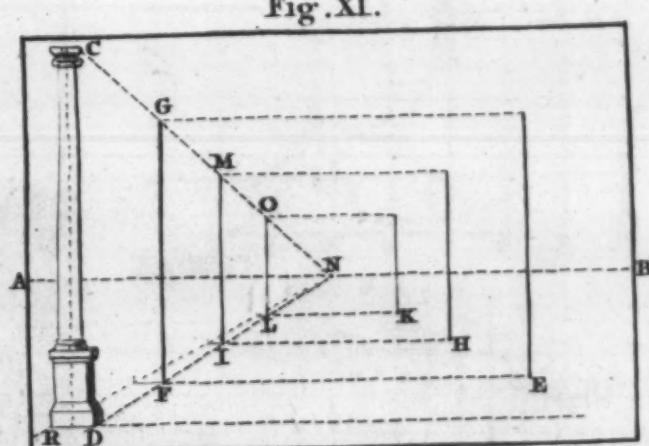
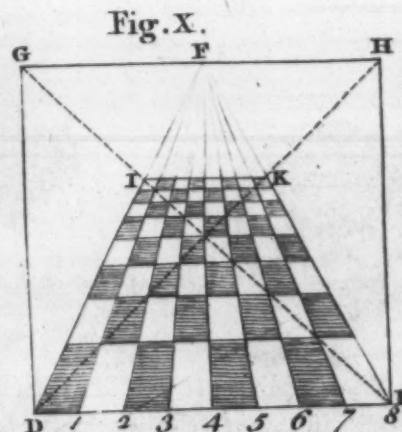
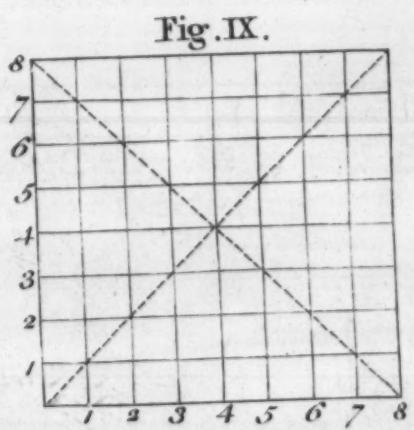
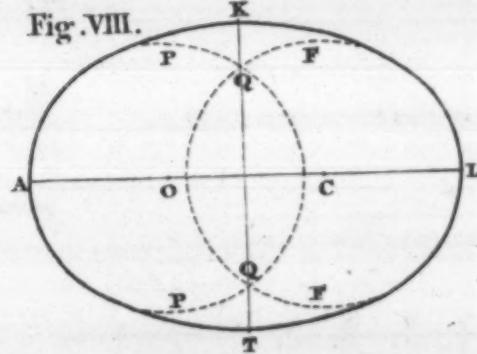
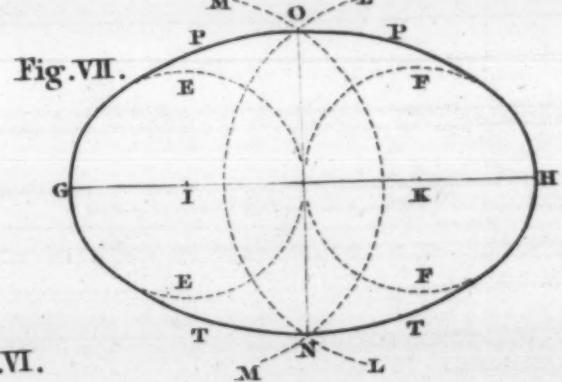
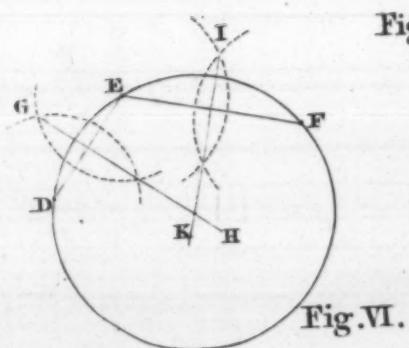
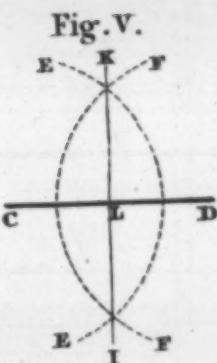
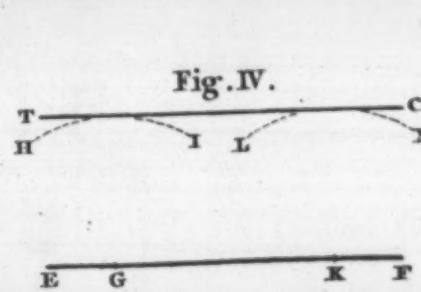
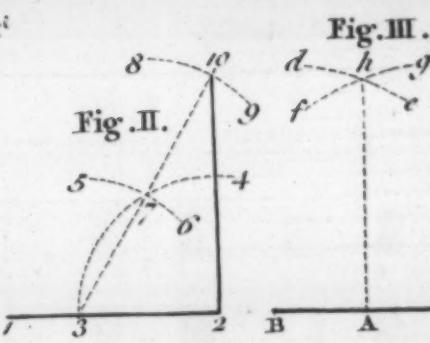
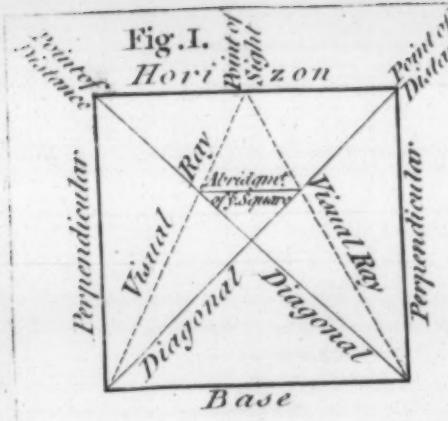
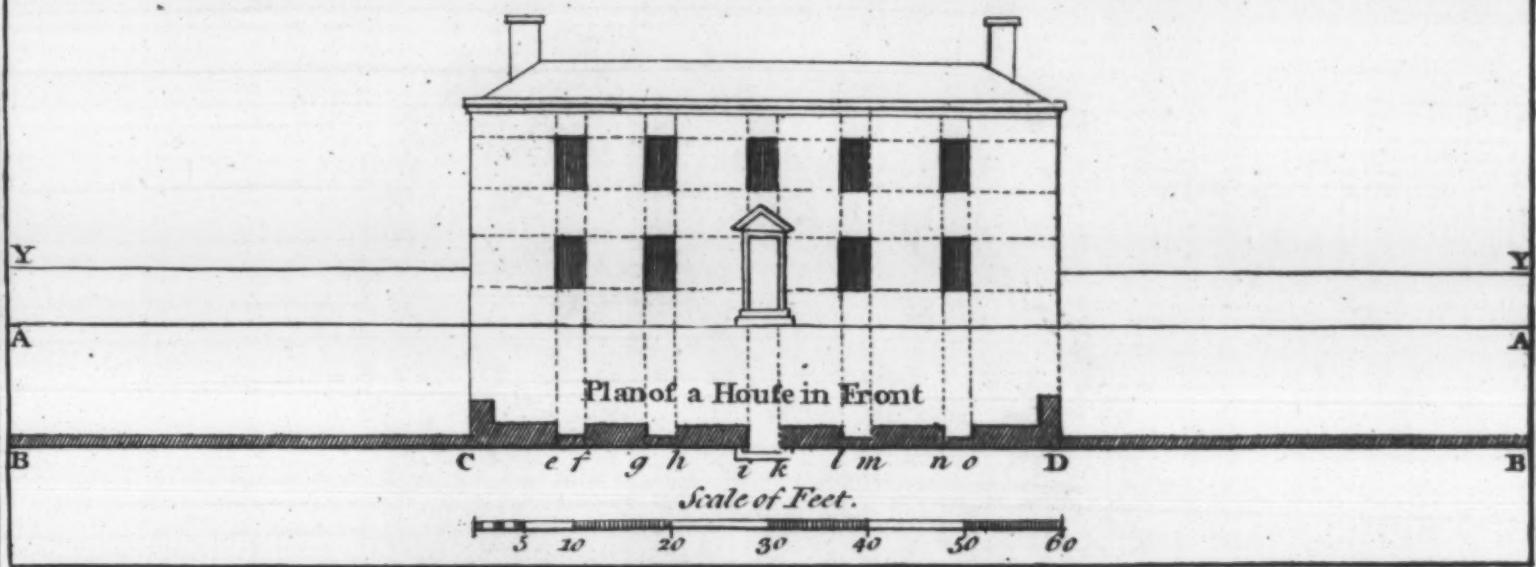




Fig.I.

Direct View.



Oblique View.

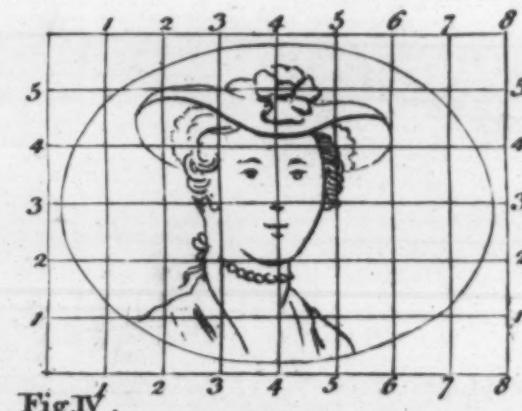
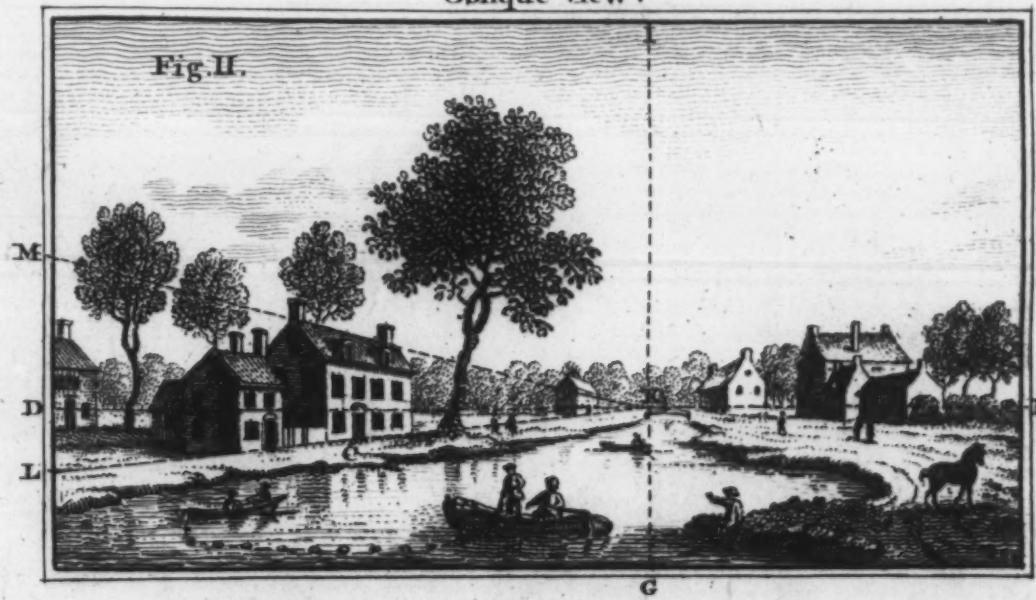
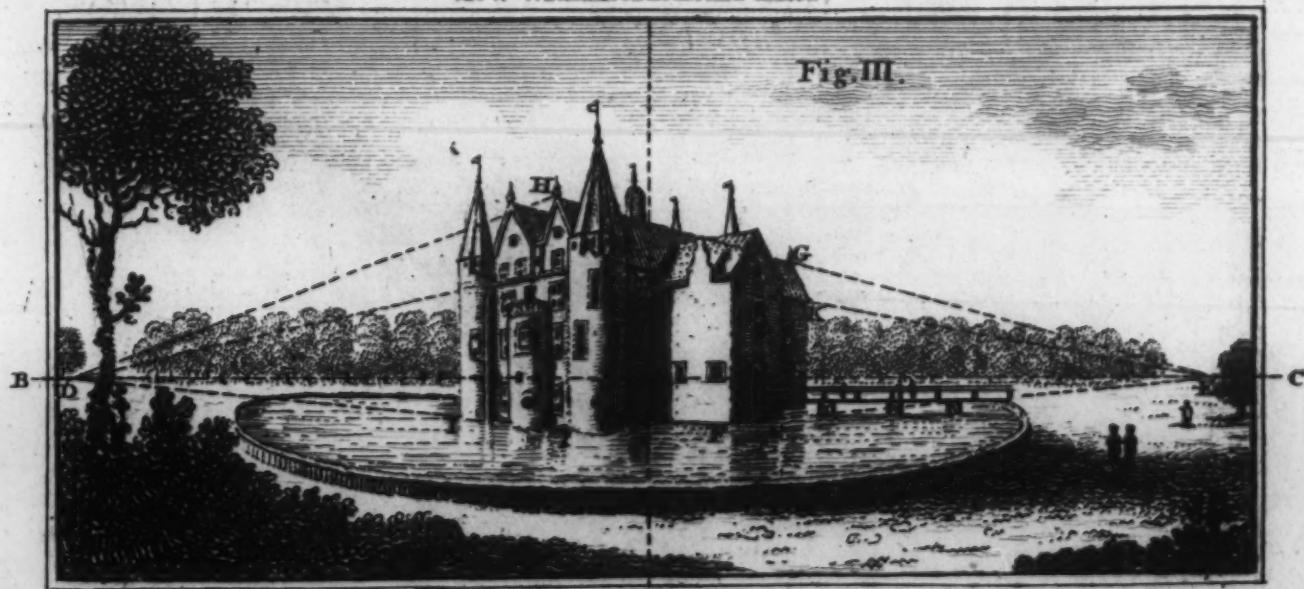


Fig. IV.



Fig. V.

View with Accidental Points.





JB. Grune del.

P.C. Jngouf sculp. JB. Grune del.

P.C. Jngouf sculp.





P.C. Ingouf sculp

J.B. Greene del.

P.C. Ingouf sculp

J.B. Greene del.





J.B. Gravé del.

P.C. Jougouf sculp.

J.B. Gravé del.

8







SS. 1



SS. 2



SS. 3



SS. 4



SS. 5



SS. 6





Collect inv. adcol.

R. Brander sculp.

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C. Grignion sculp.





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*M^r. GARRICK
in the Character of Abel Drugger*



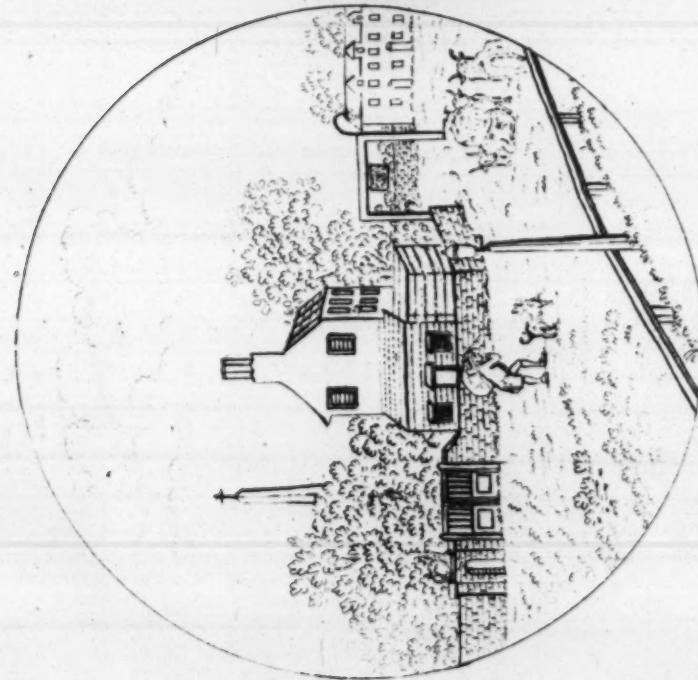
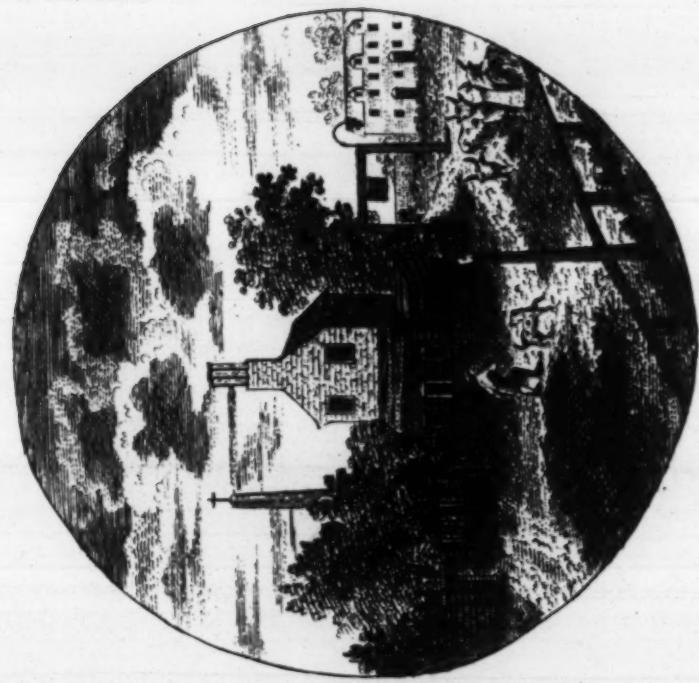
*M^r. BURTON
in the Character of Subtle
Alchemist Act 2^o Scene 6th*



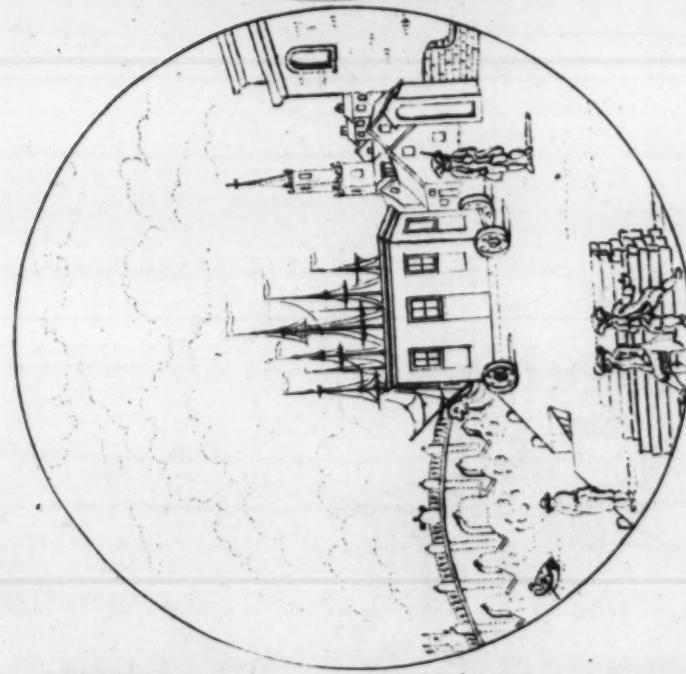
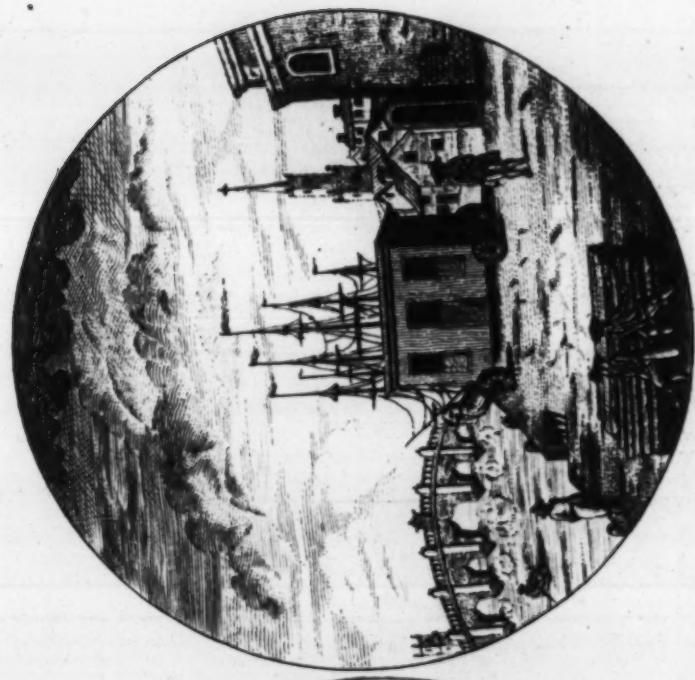
*M^r. PALMER
in the Character of Face*



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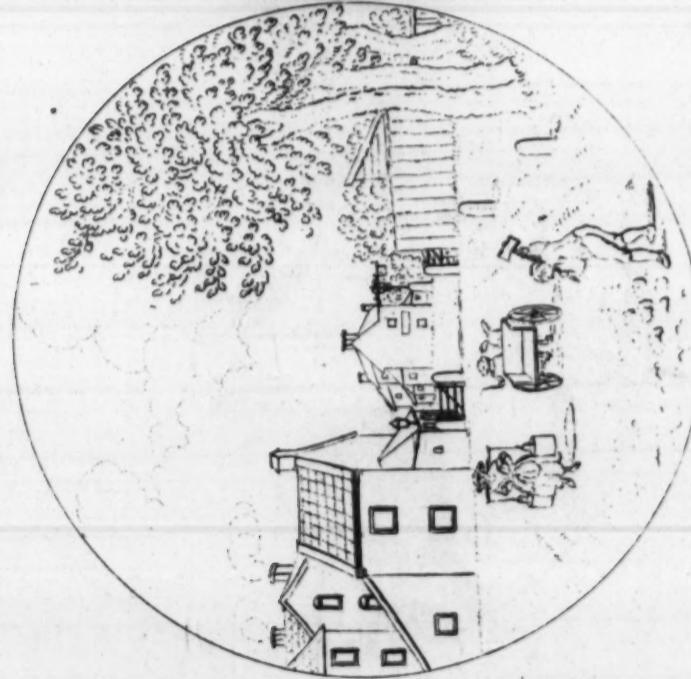
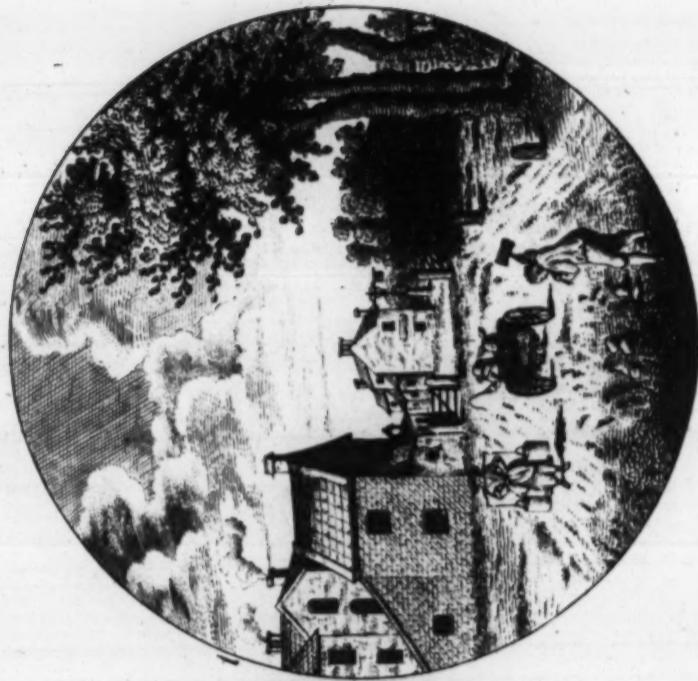






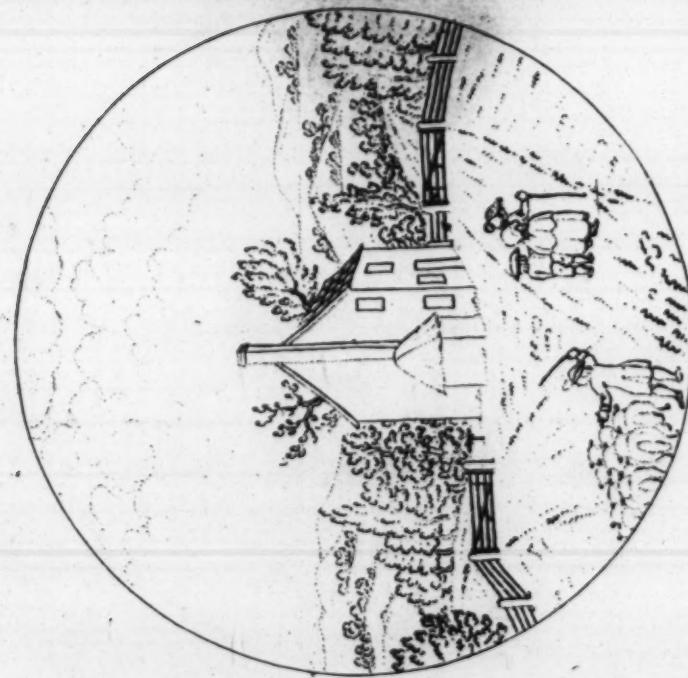
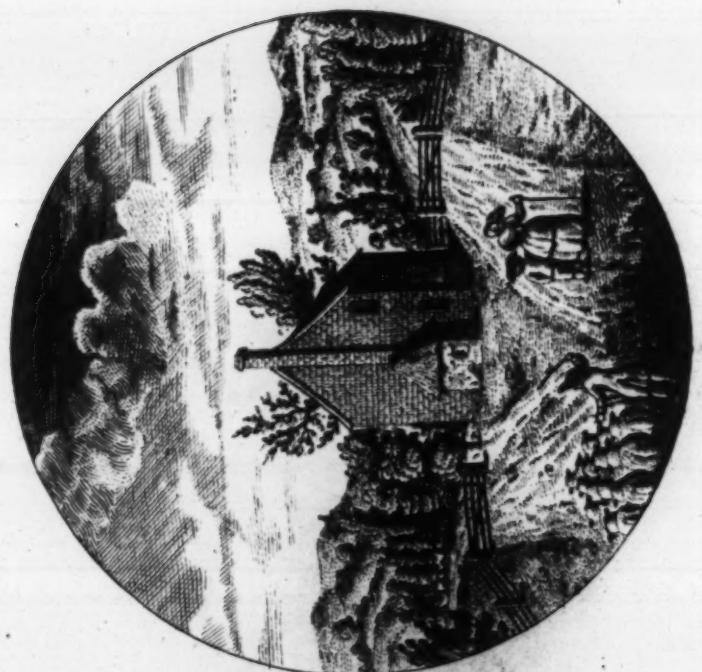
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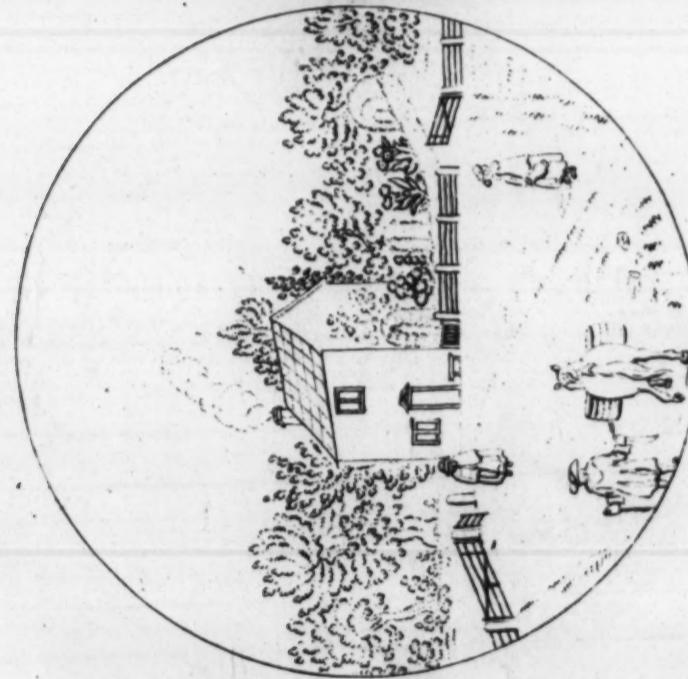
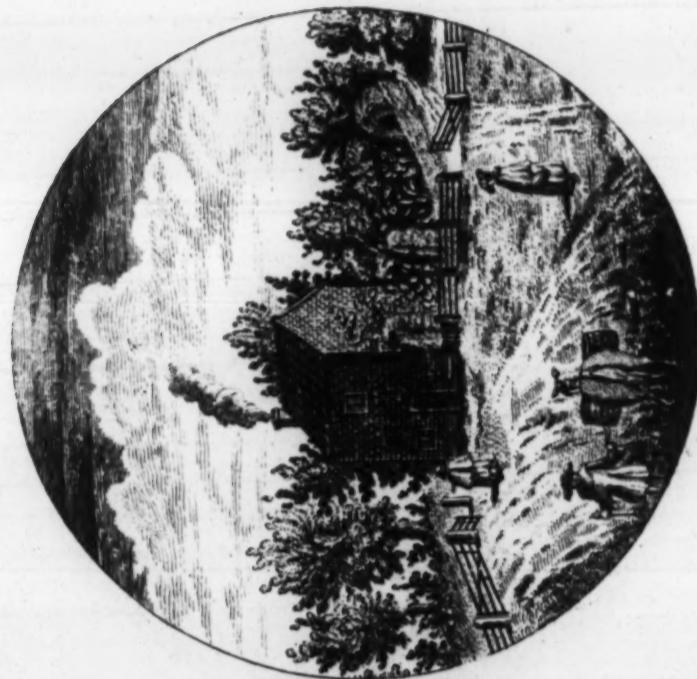
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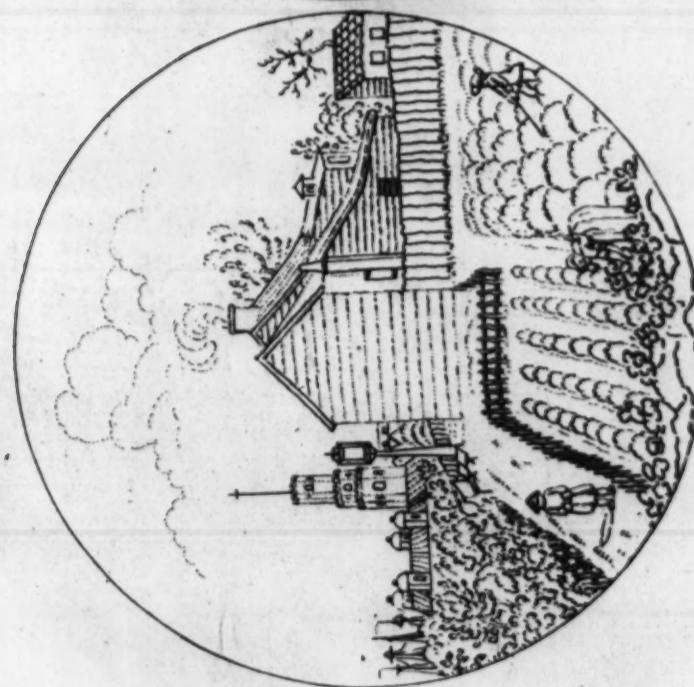
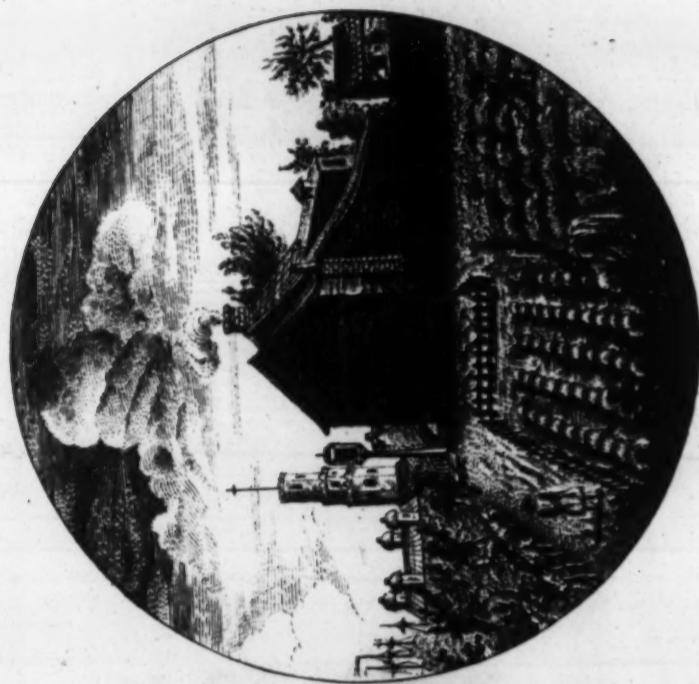
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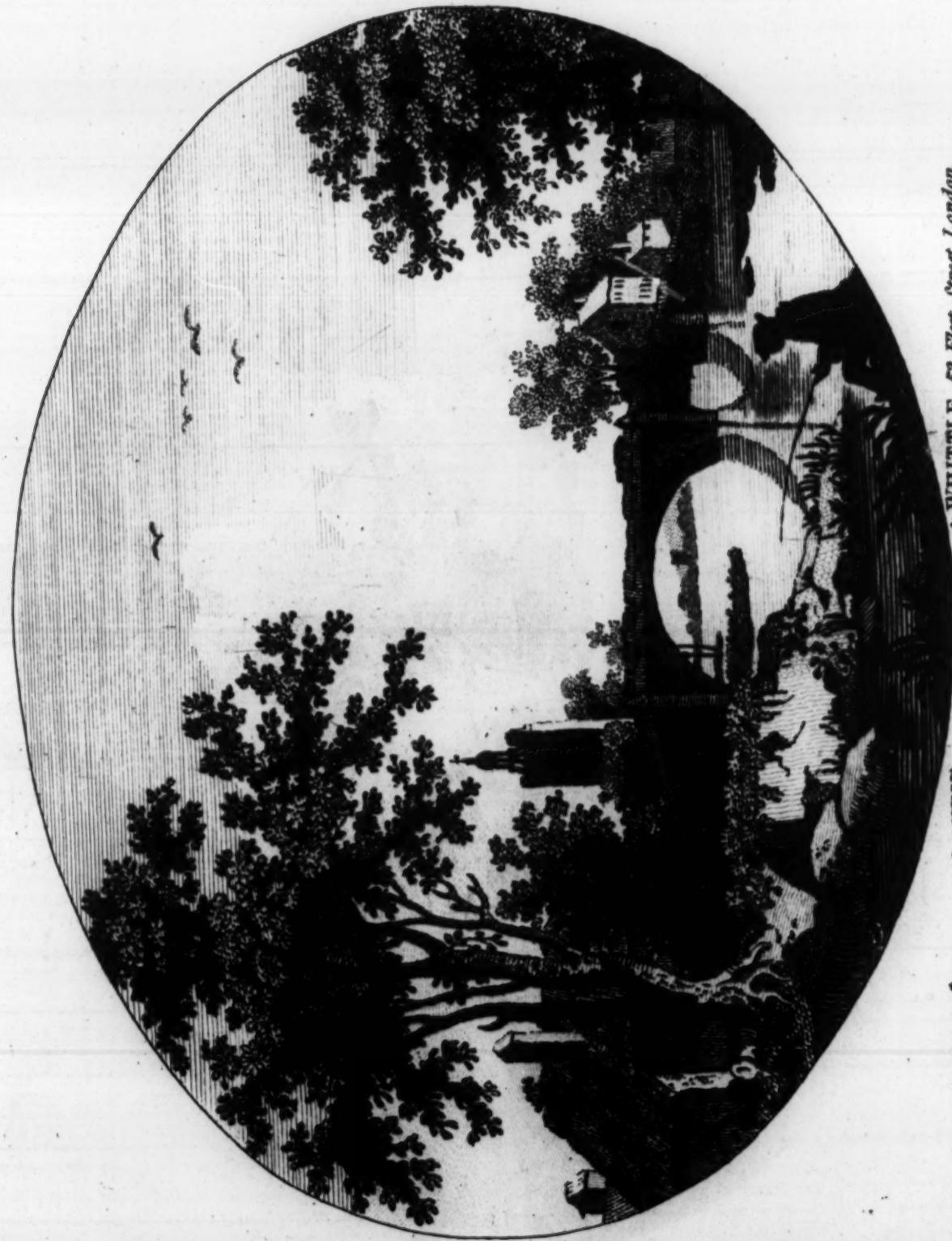
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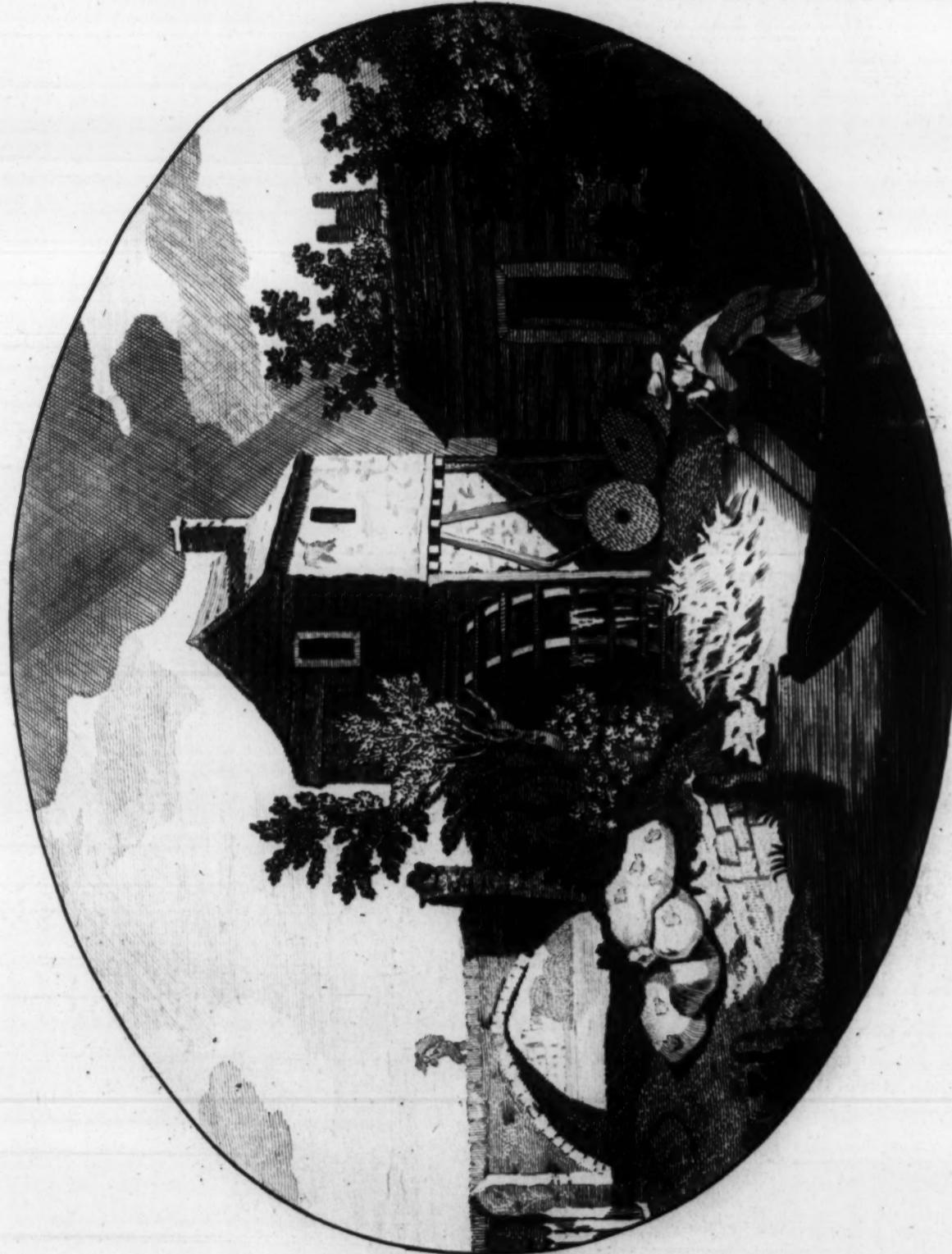
Published 12th May, 1794, by L. LAURIE.

6 WHITTLE, 53, Fleet Street, London.









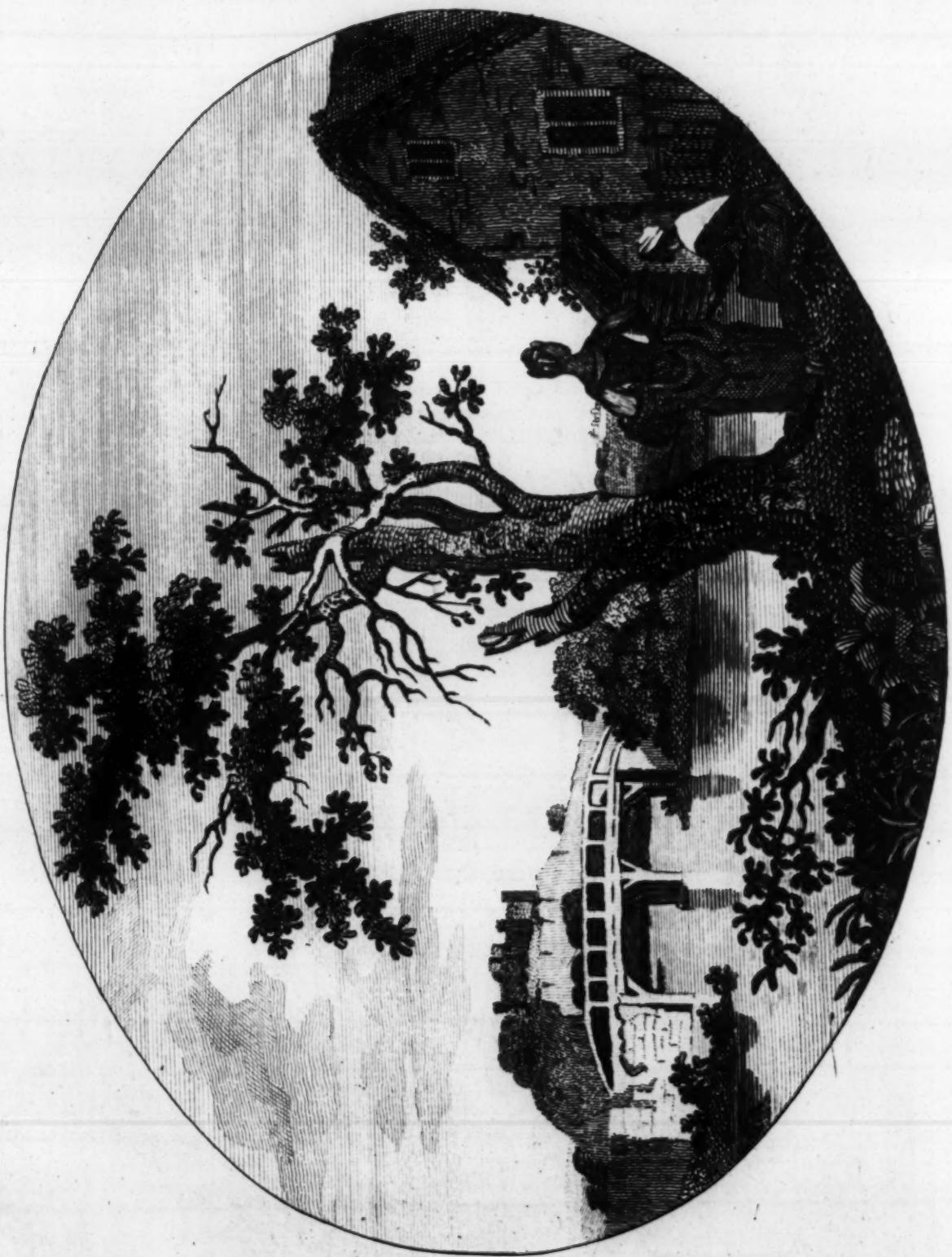
















J. Macon sculp.

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Jn: Collet inv: et delin.





Jn^e Collet inv^e et delin.

Printed for R. & J. Dods, 1, 33, Fleet-street, as the title directs.

"By me, J. Collet."



By George

London Printed for Phil. Layer, 130 Fleet Street, author to divers

J. Collett del. et inv.





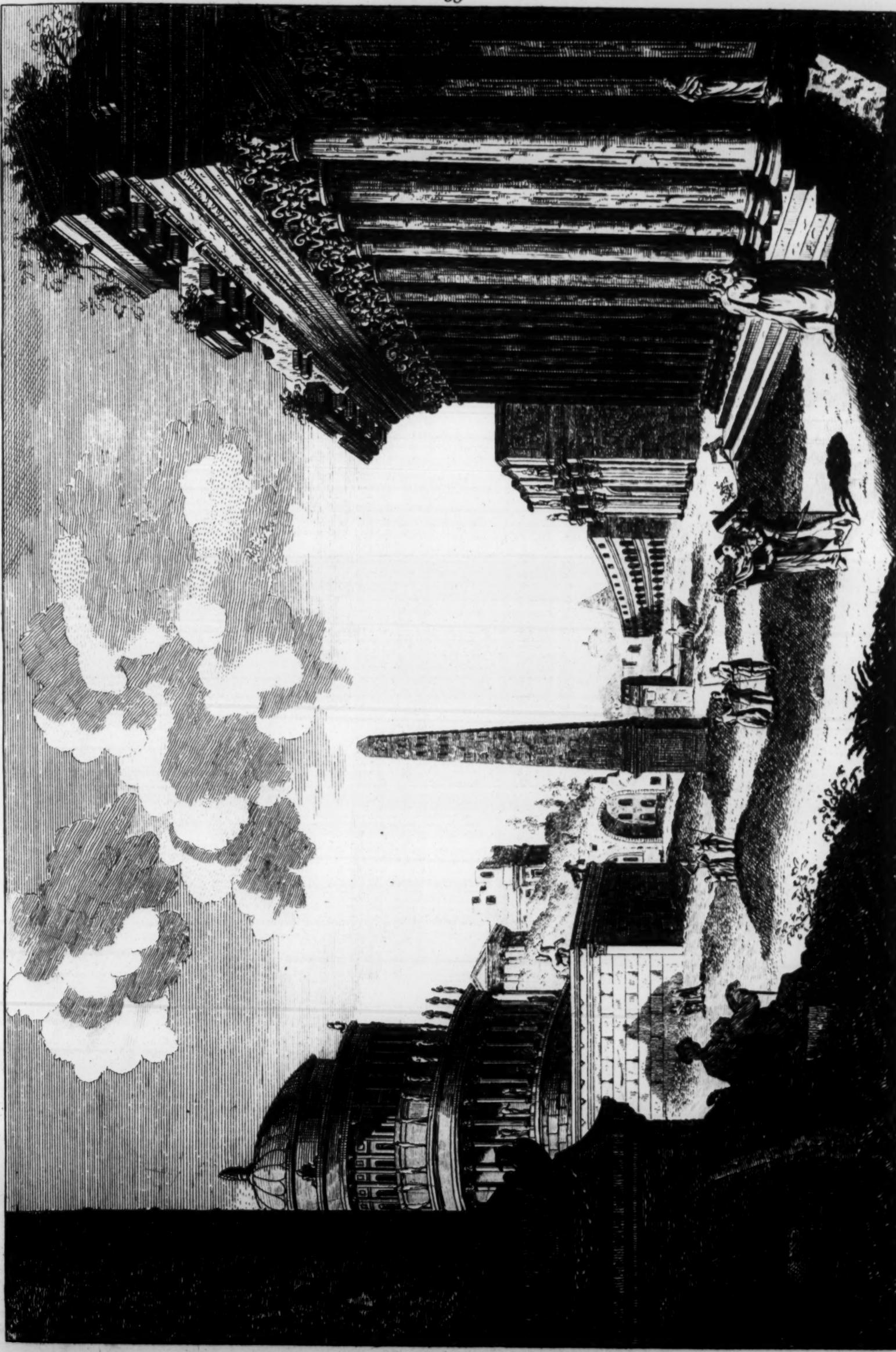


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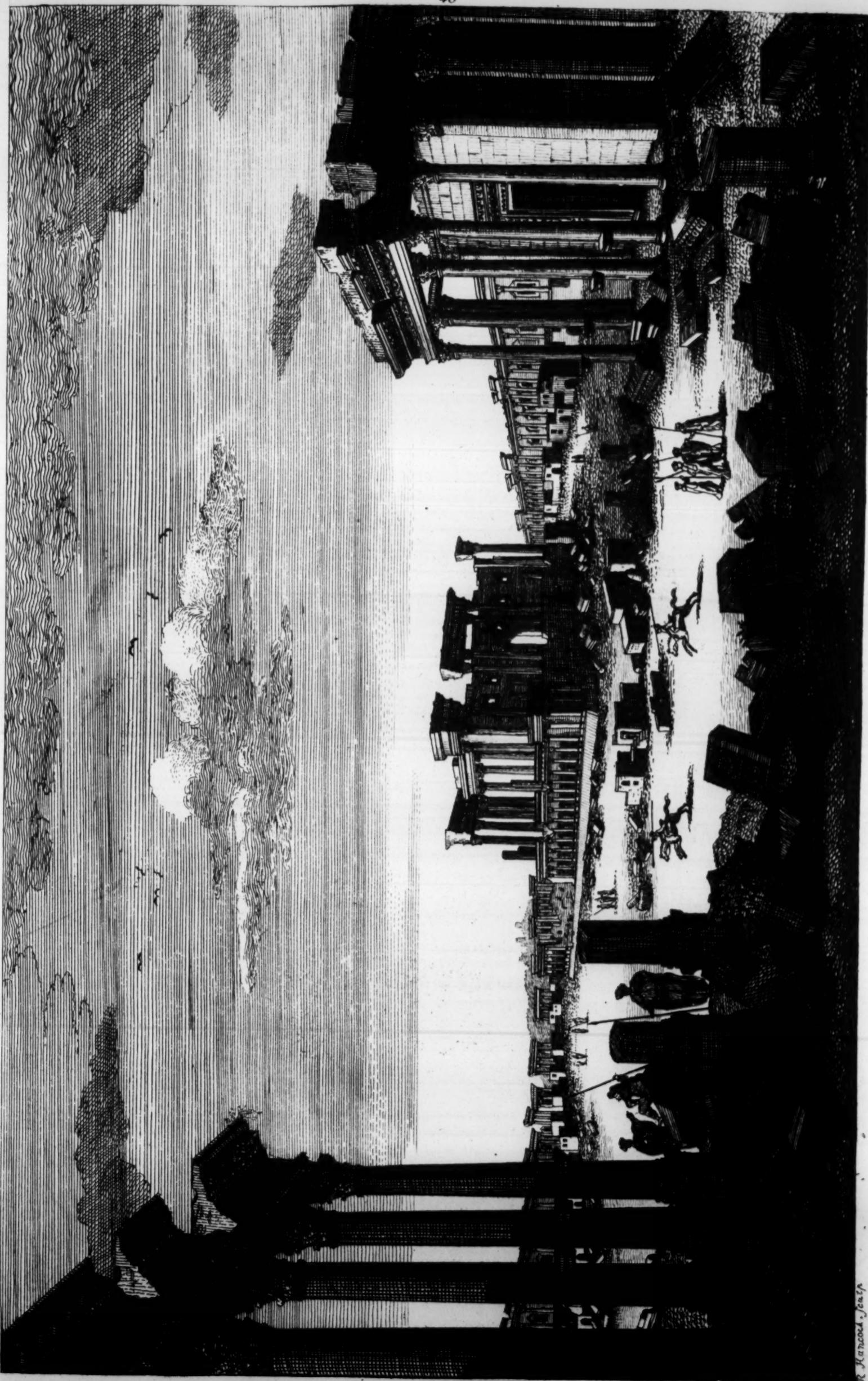
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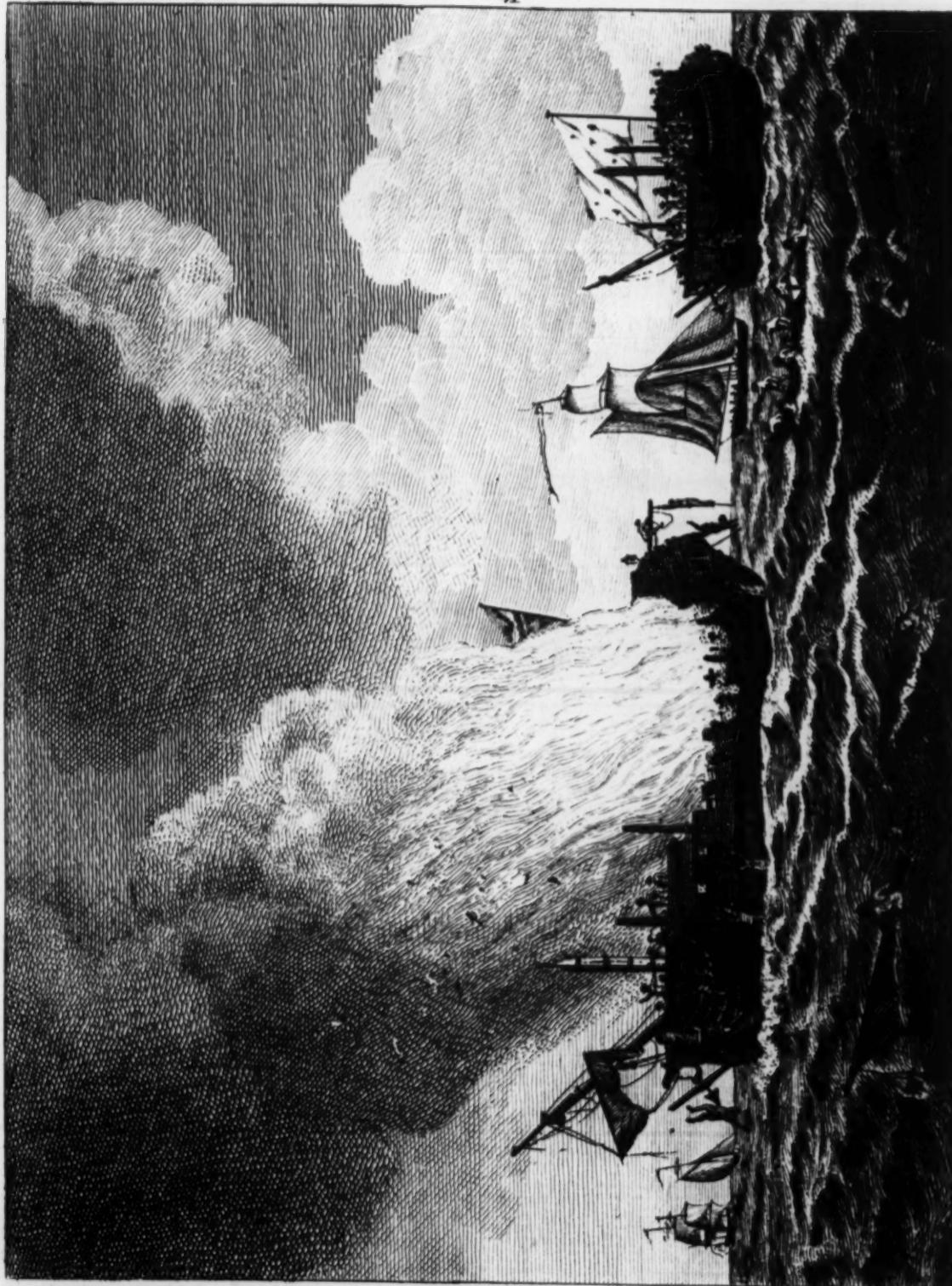








N^o 24

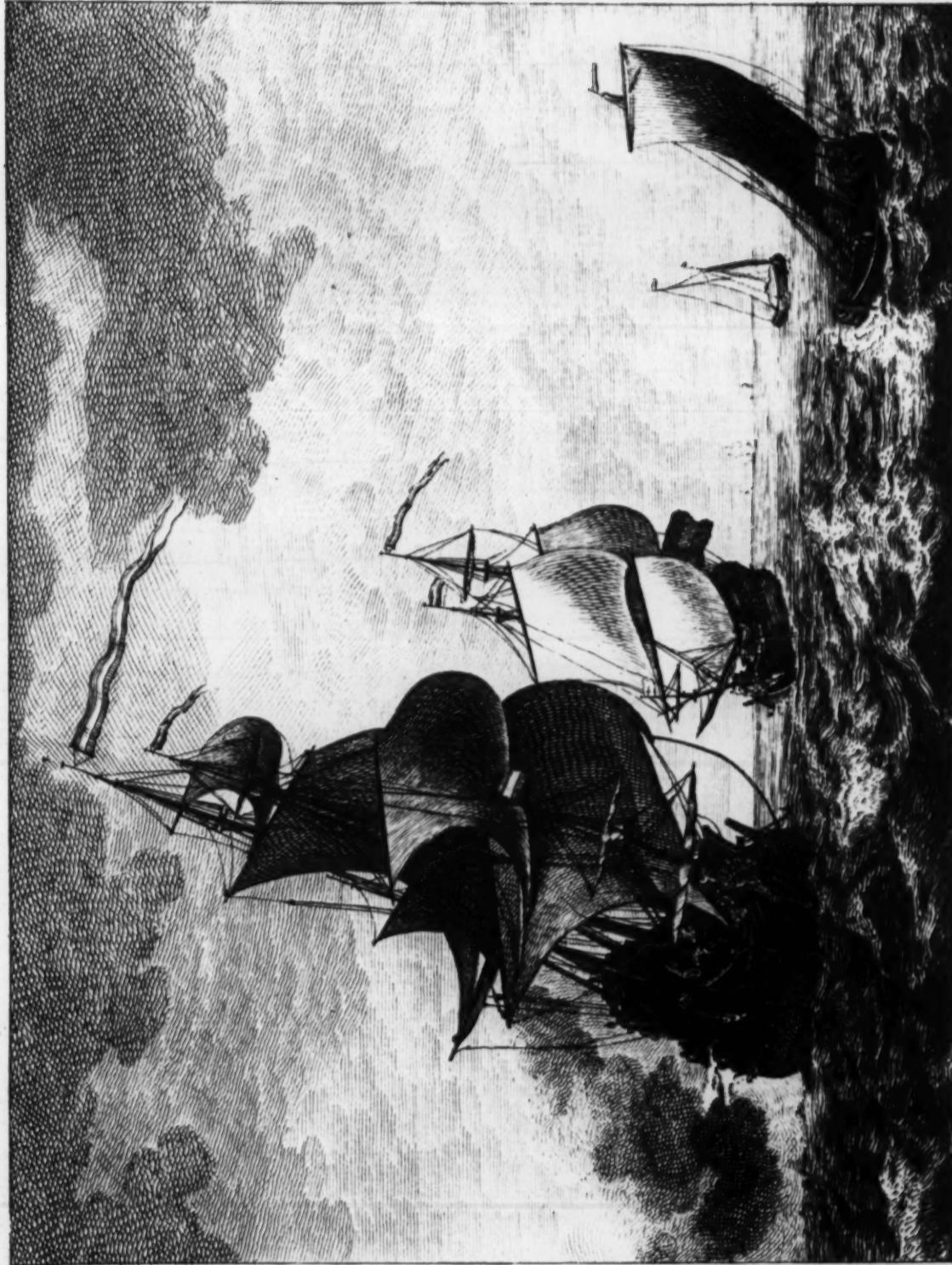


The destroyed situation of the QUEBEC and the SURVEILLANTE.

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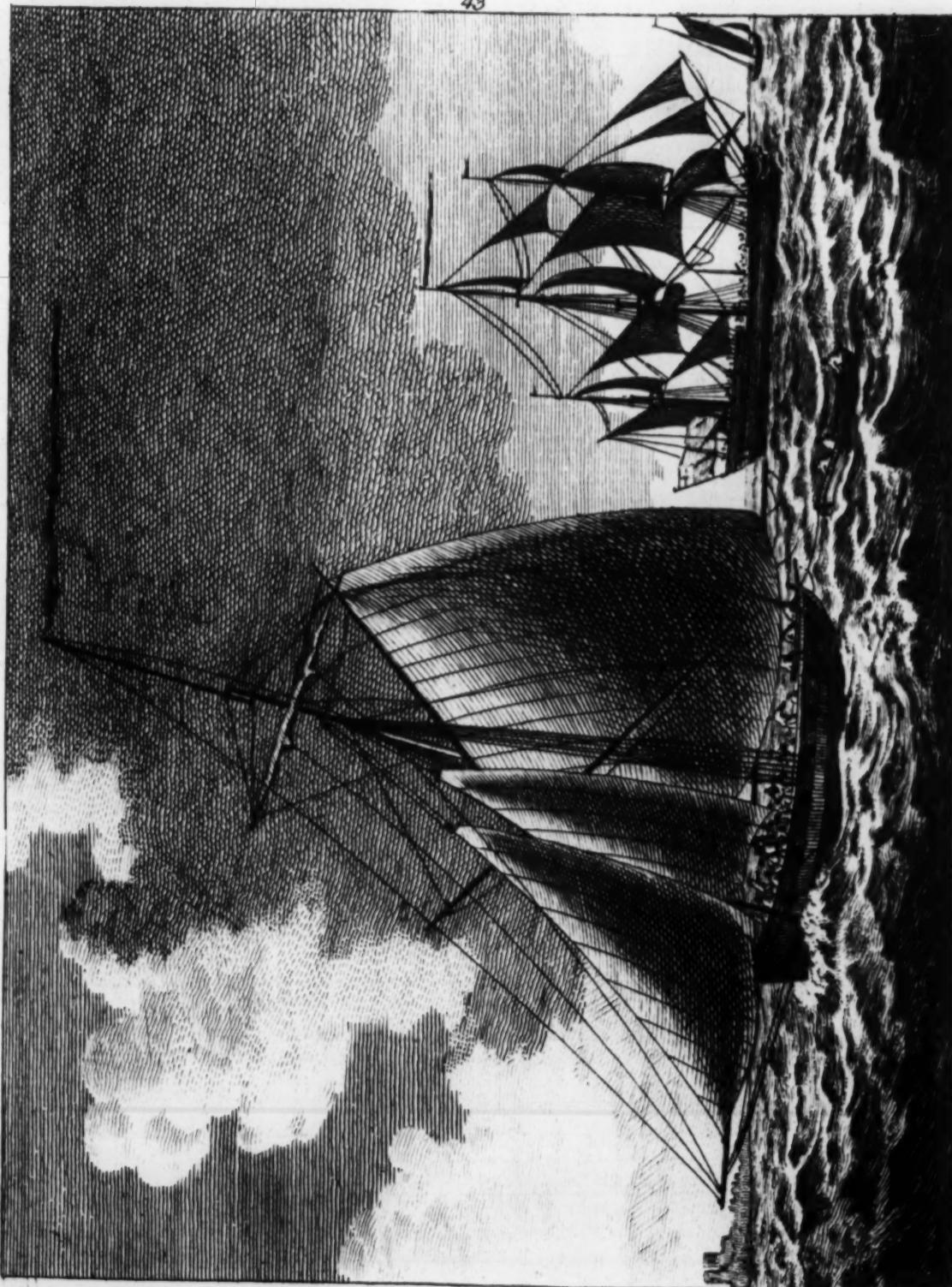
M. Gandy A.





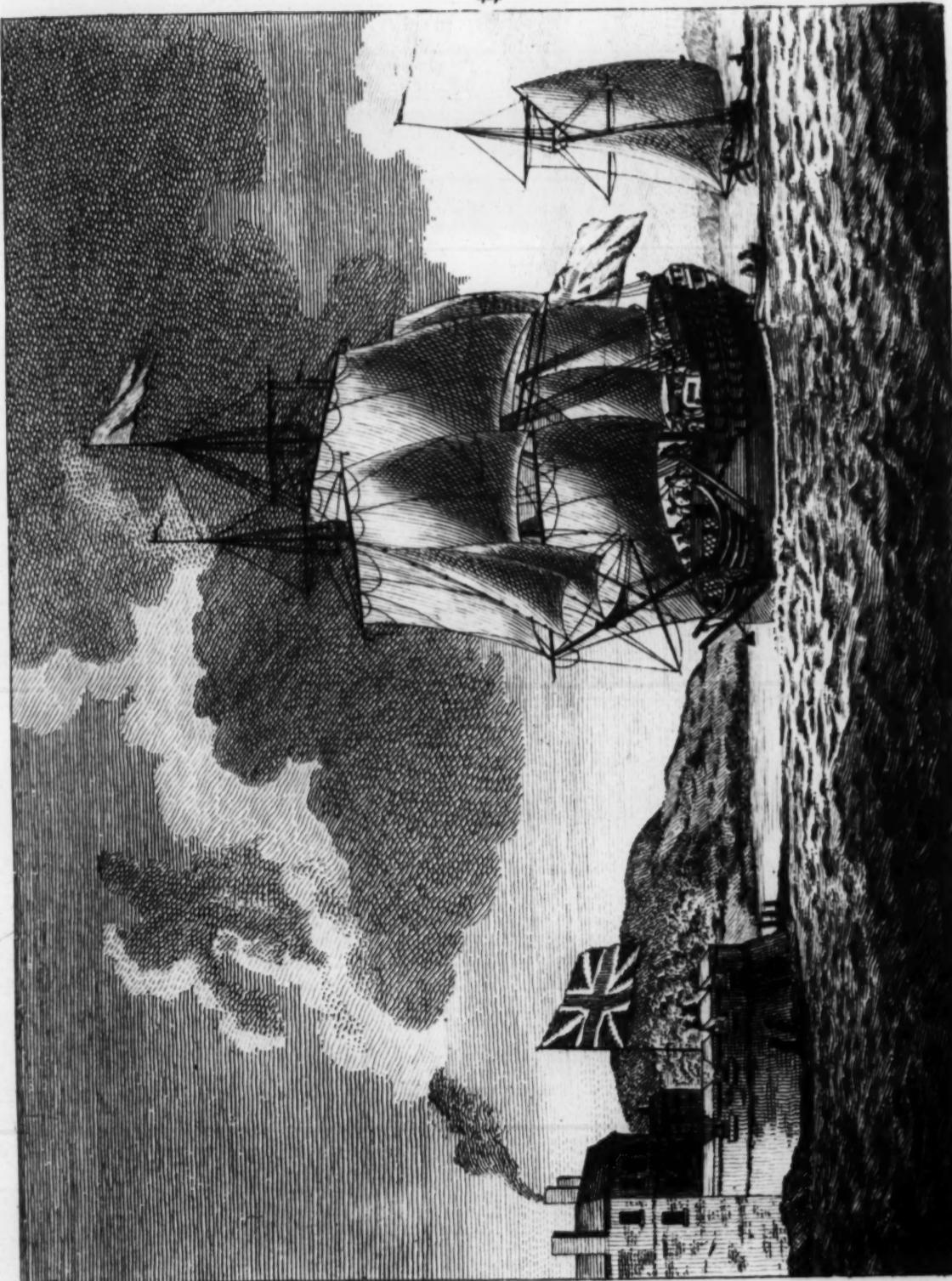
A. Moderate Breeze.
London. Published March 24, 1797, by Roger Ackermann. 3, Fleet Street.





A Sea Piece with a CUTTER, & a View of the TWO SISTERS.
London, Printed for R. Scott, in Fleet Street.





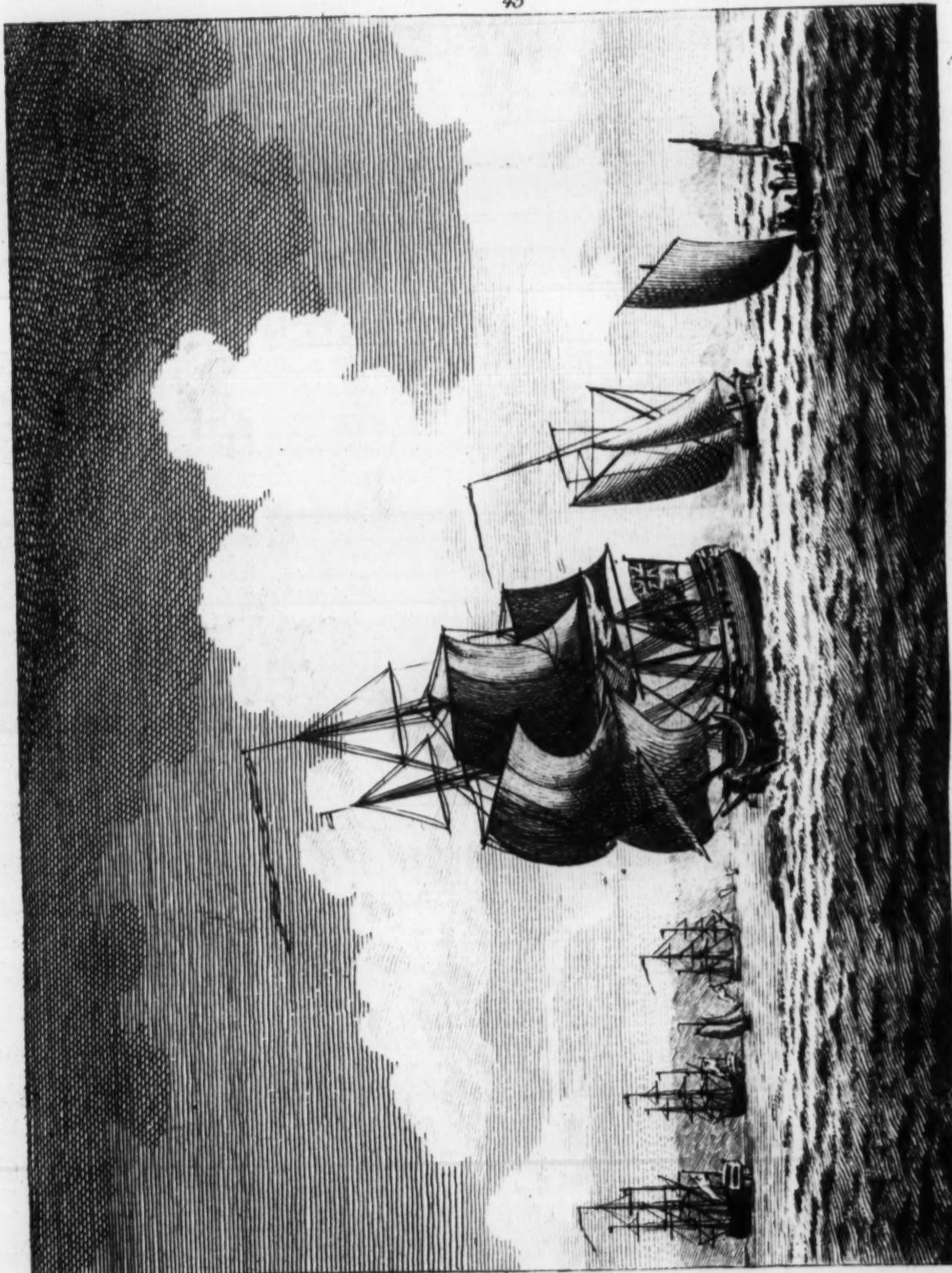
A Ship coming to SPITHEAD, with a View of COWES CASTLE.
Mr. Clowes del.

London, Published Feb. 24. 1797, by Robert Sayer, No. 3 Fleet Street.

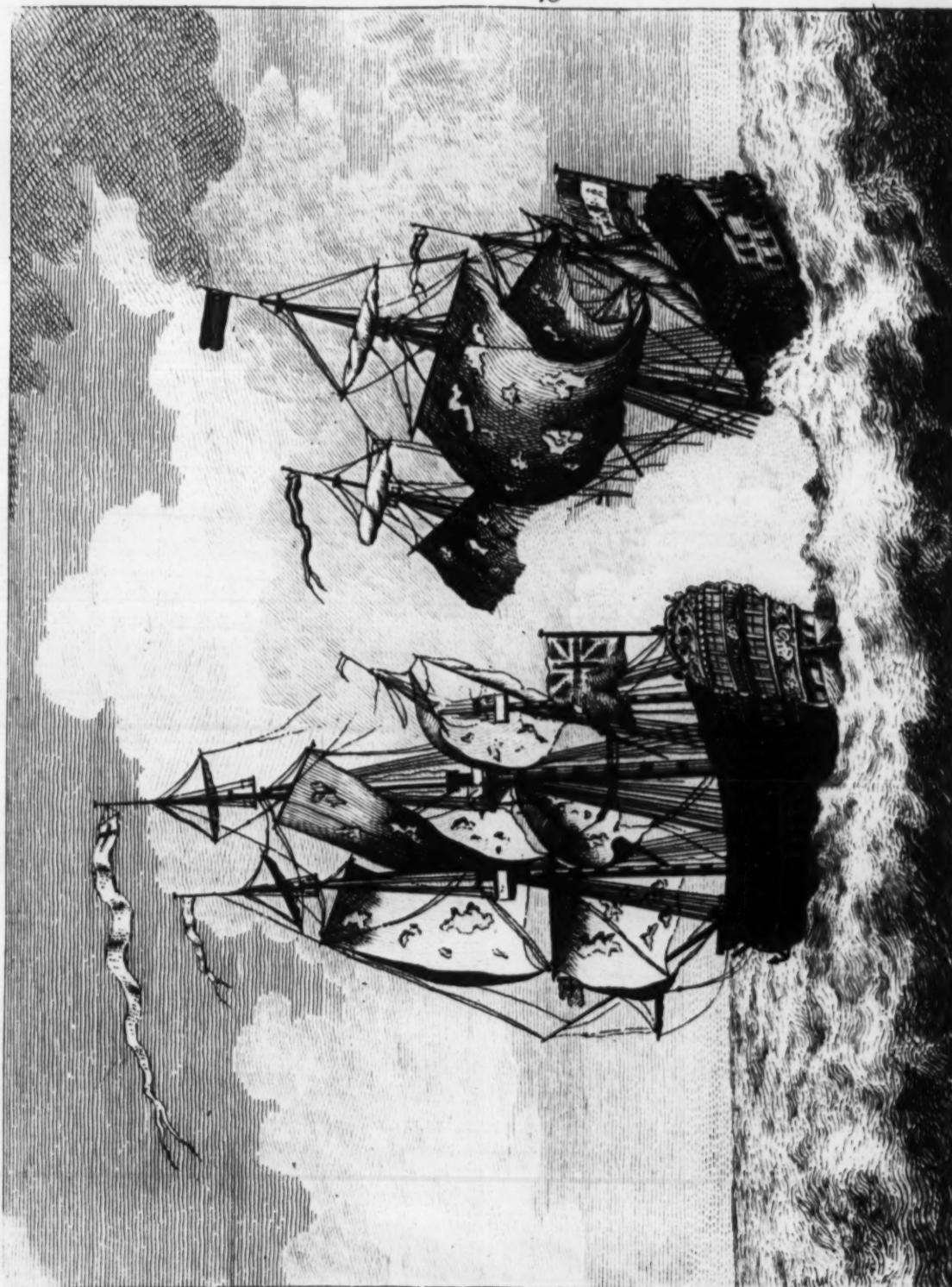


PLYMOUTH SOUND with a distant view of the NEWSTONE.

London, Published 24 Feb 1787, by R. & S. D. Pintor, 53, Fleet Street.







An Engagement between an ENGLISH and a DUTCH Man of War.

London. Published 24 Feb 1797 by Robert Sayer Printeller. 53 Fleet Street.





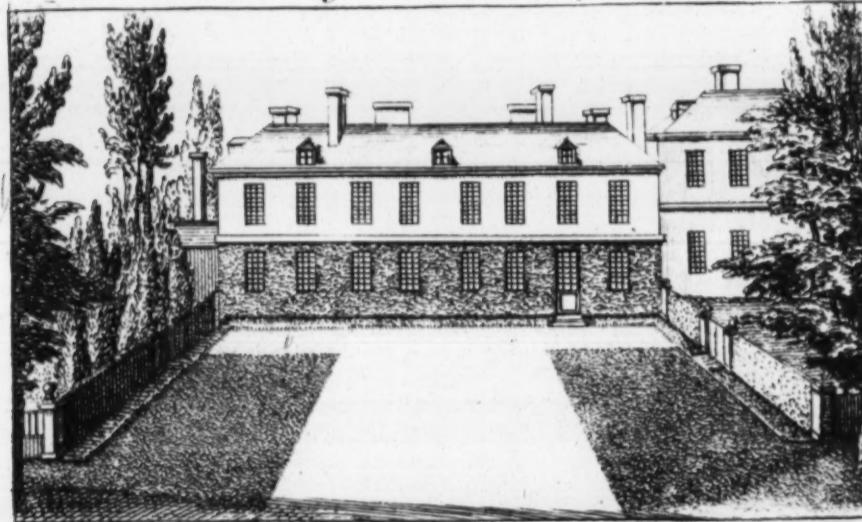




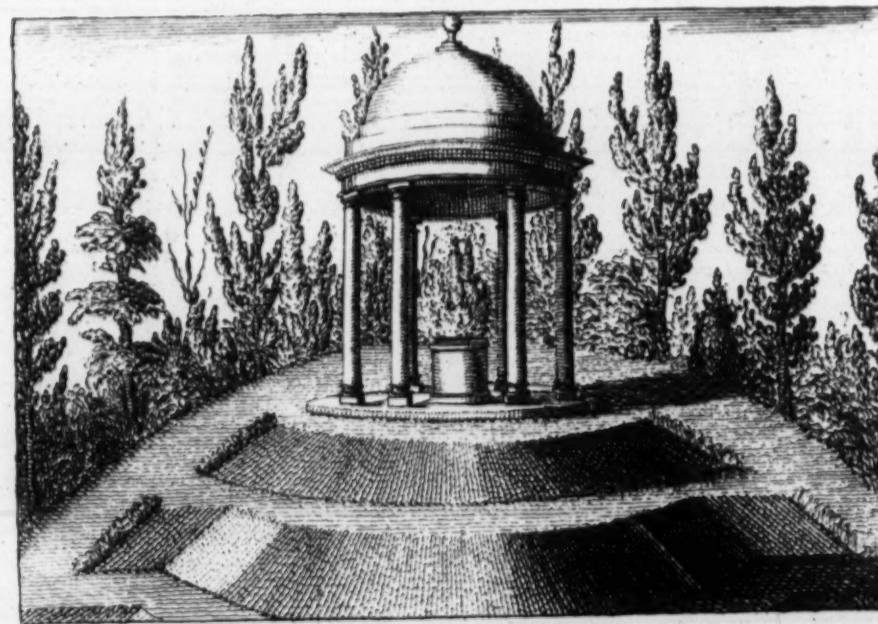


49

Ornamental Buildings, in Richmond Gardens.



THE QUEEN'S PALLACE
Printed for Robt Sayer Printer &c No 53 Fleet Street.

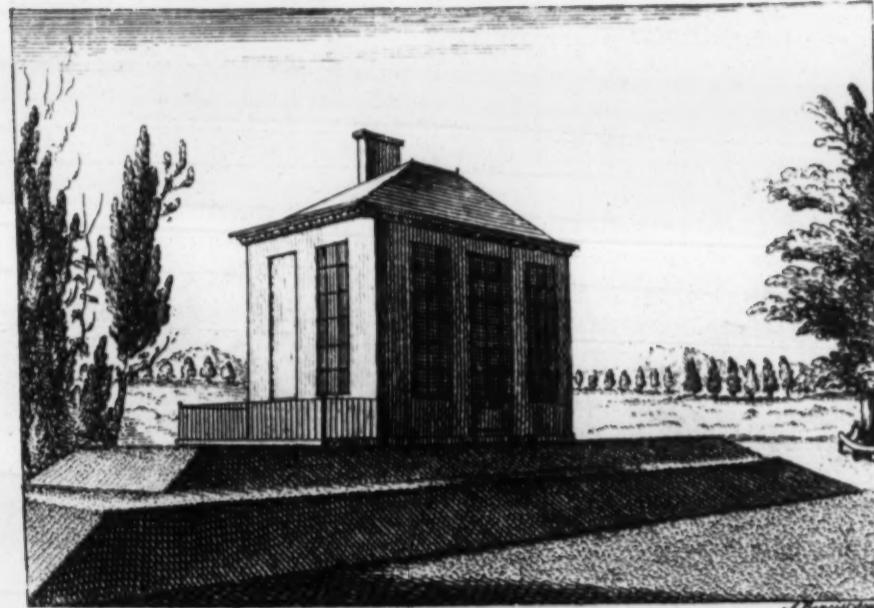


J. Bowles Sculp.

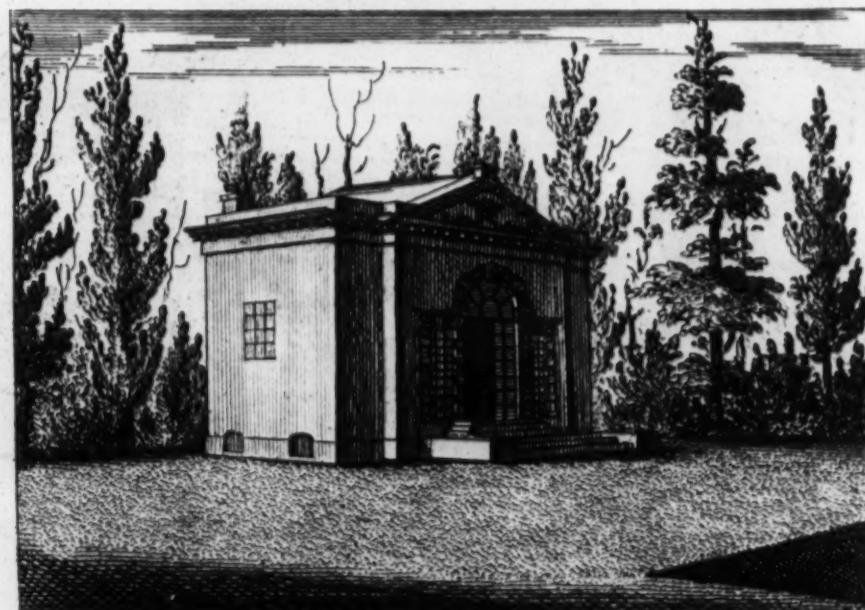
THE TEMPLE.



34



THE SUMMER-HOUSE ON THE TERRASS.—



J. Boileau Sculp.

THE DAIRY.





Illustr. Sc.

Printed for Rob Sayer N^o. 53 Fleet street.





J. Junc. 18





I. Linnæus.







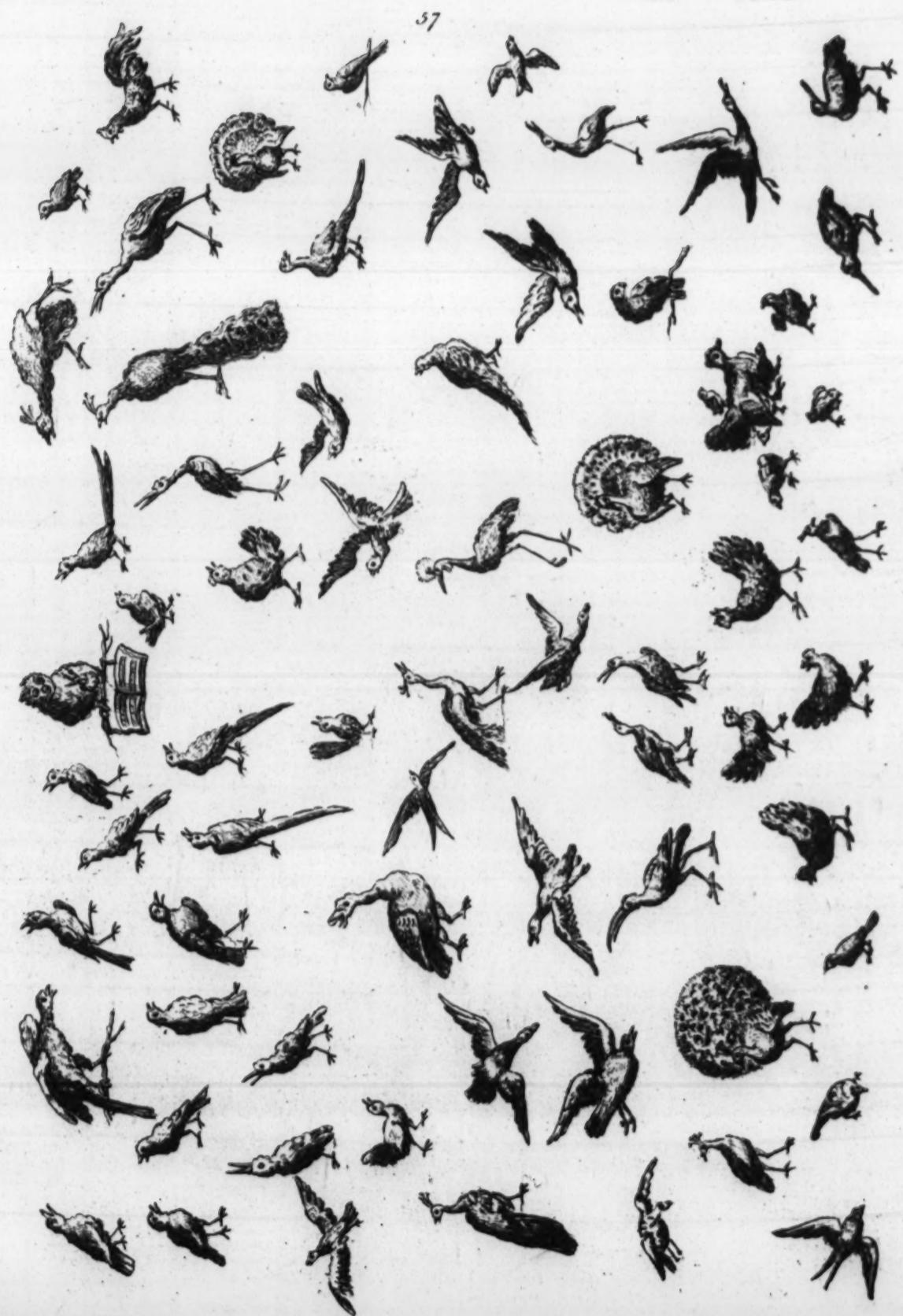


J. Junc. Sc.

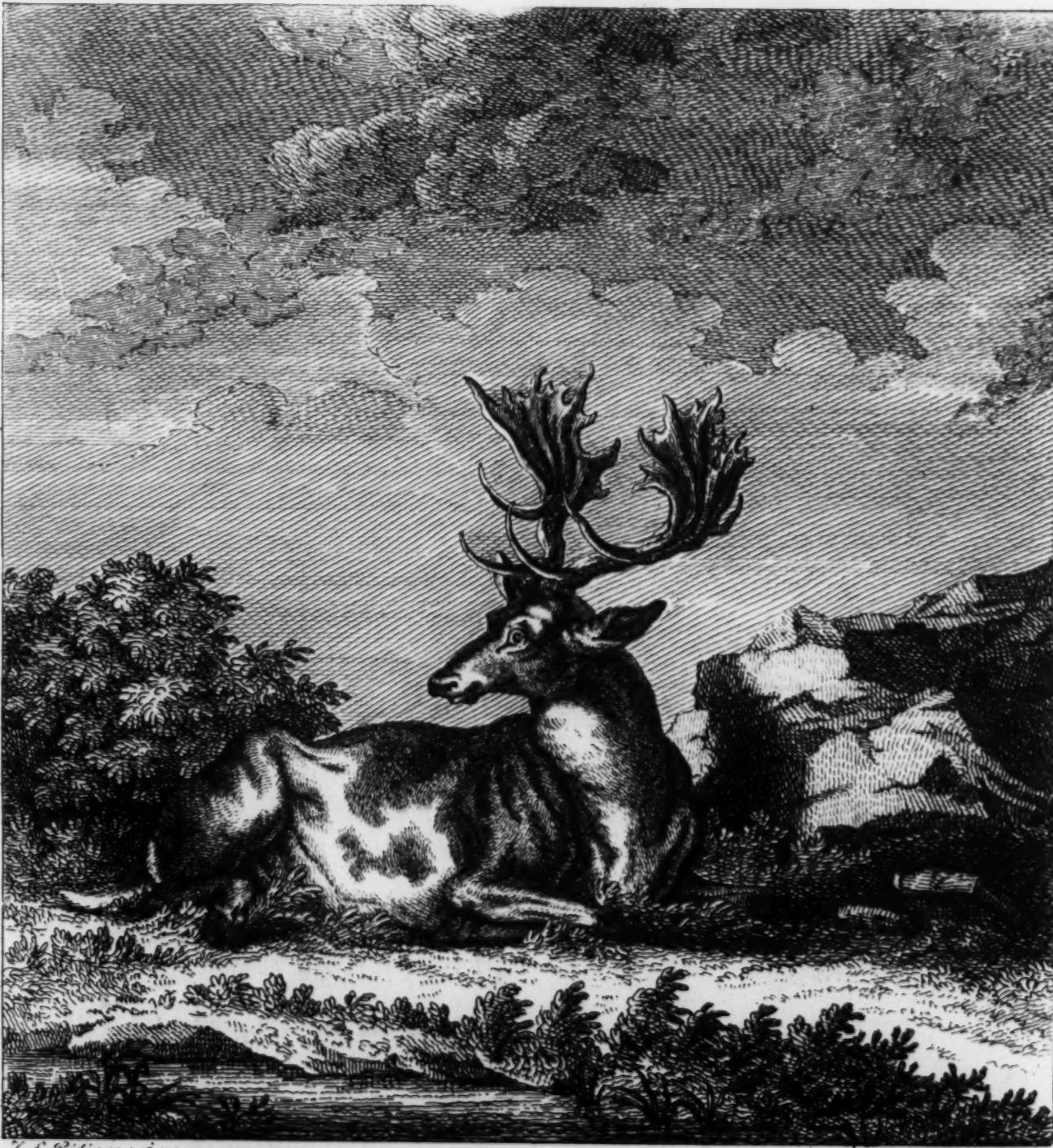












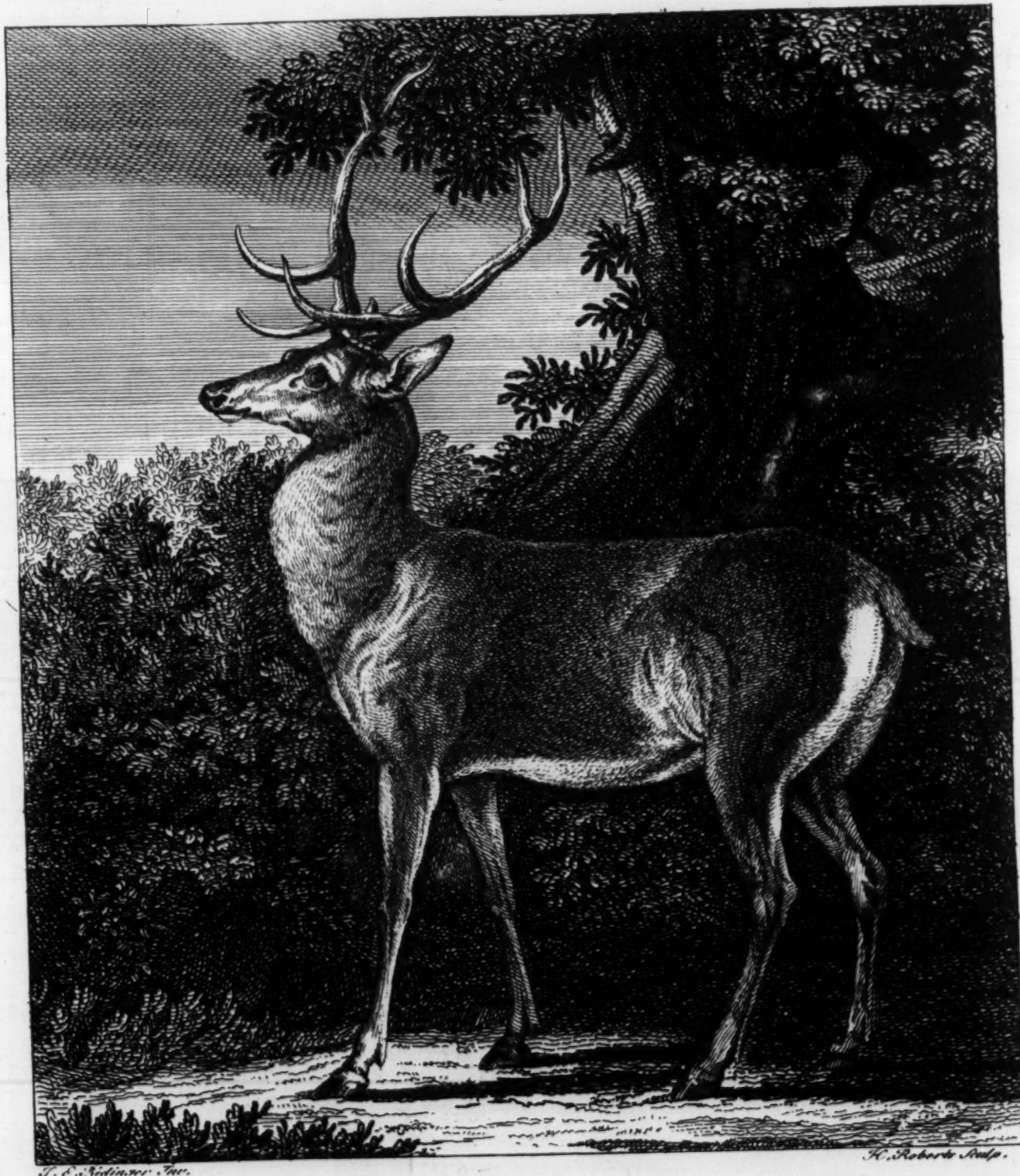
J. E. Ridinger inv.

H. Roberts Sculp.

A Fallow Deer Couching in Cover.

Printed for Robt. Taylor, Map & Printseller, 53 Fleet Street.





A Stag rous'd from his Covery



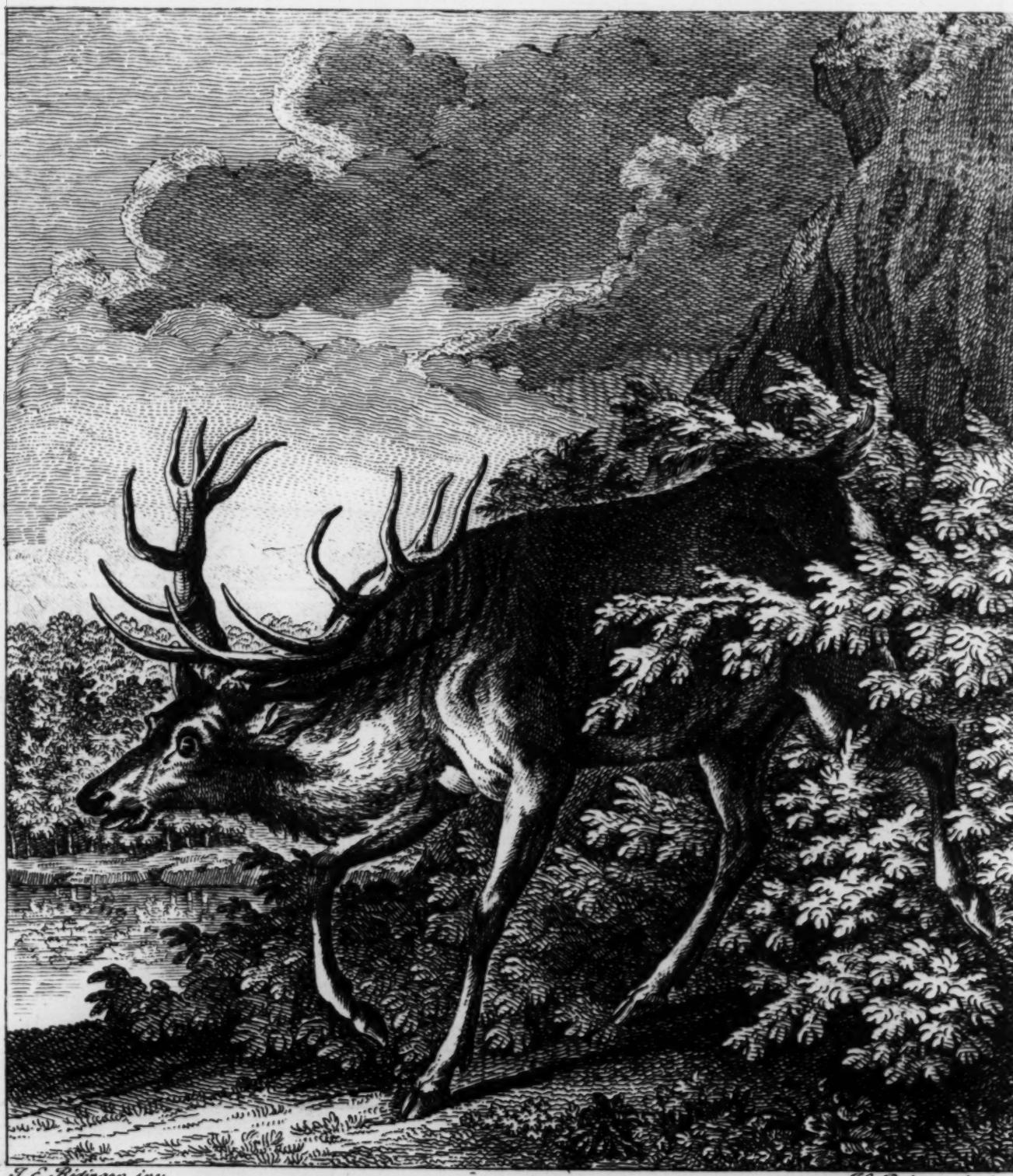


T. C. Ridinger inv.

H. Roberts Sculp

A Fallow Deer Anharbour'd





T. E. Ridinger inv.

H. Robert A. delp.

A Stag upon Scent in Rutting Time





J. E. Ridinger inv.

H. Roberts Sculp.

A Stag at Bay



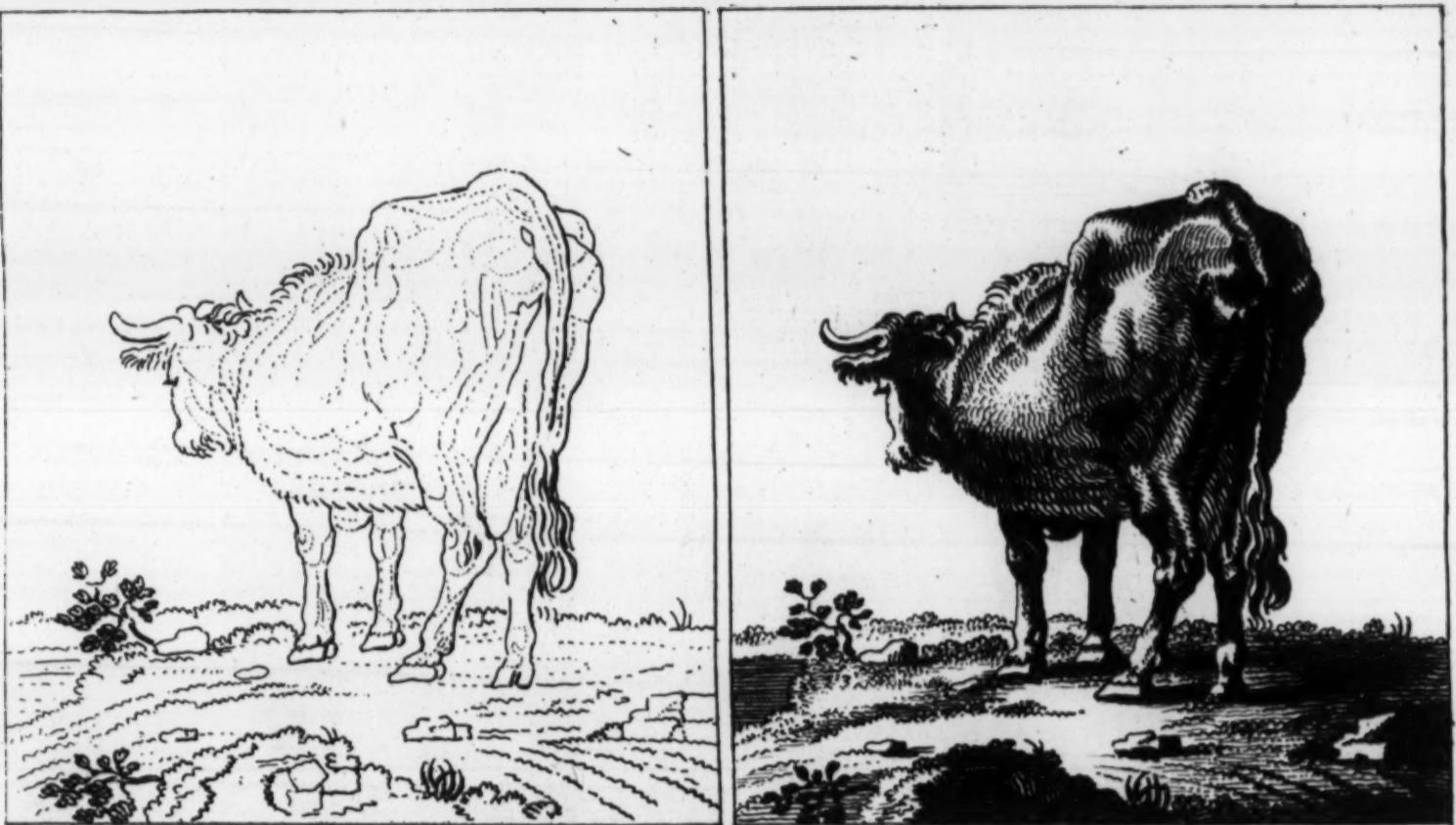


J. Ridinger inv.

H. Roberts Sculp.

The Death of the Stag







*Pithecia orangina*

ZOO V.

London. Printed for Robt. Sayer, No. 53 Fleet Street, as the Act directs.
J. C. Hill del'd & inv'td.





TIGER.

London Printed for Robert Sayer No 53 Fleet Street at the Sign of
the White Bear.







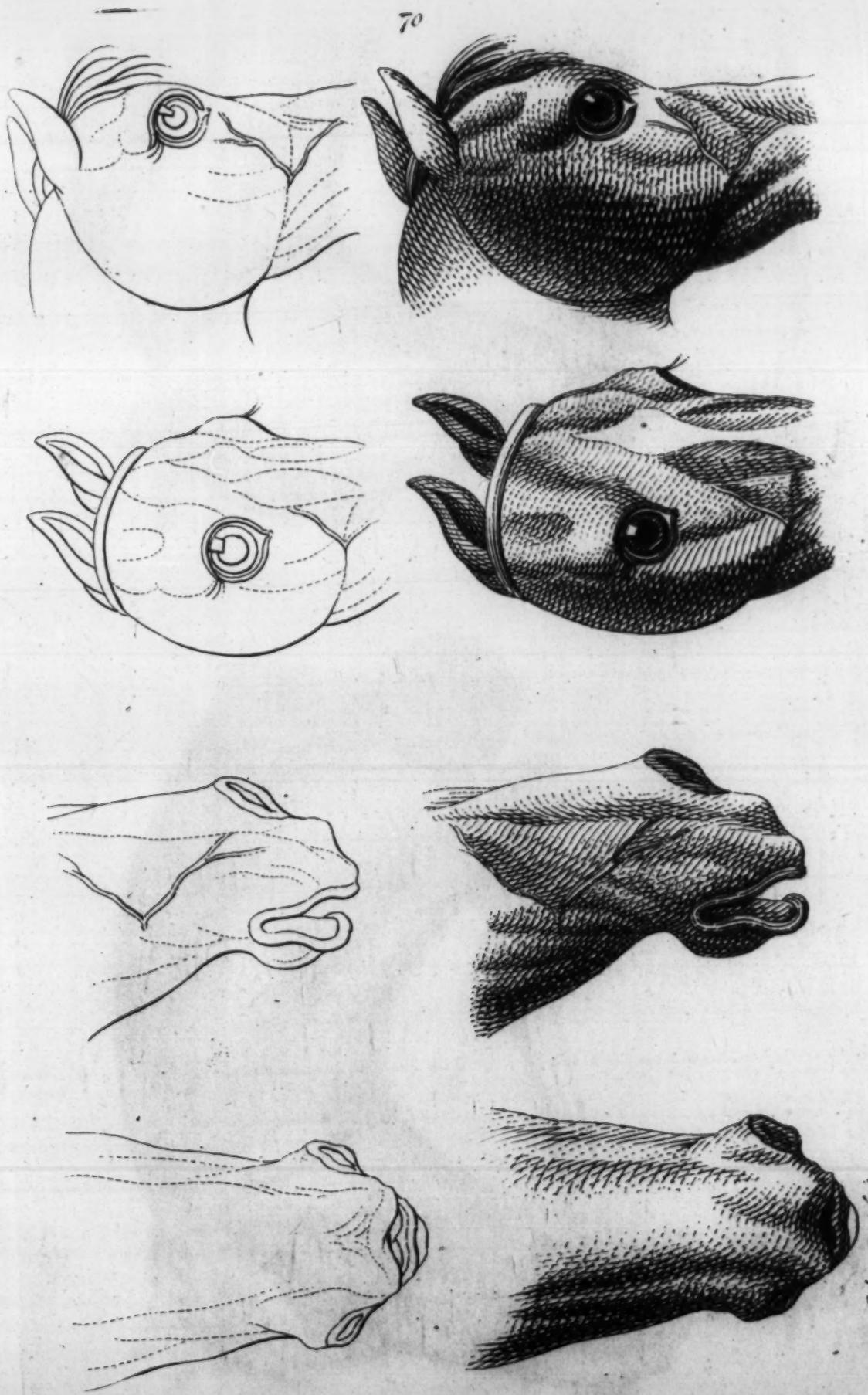


London Printed for R. Sayer
No. 33 Fleet Street.



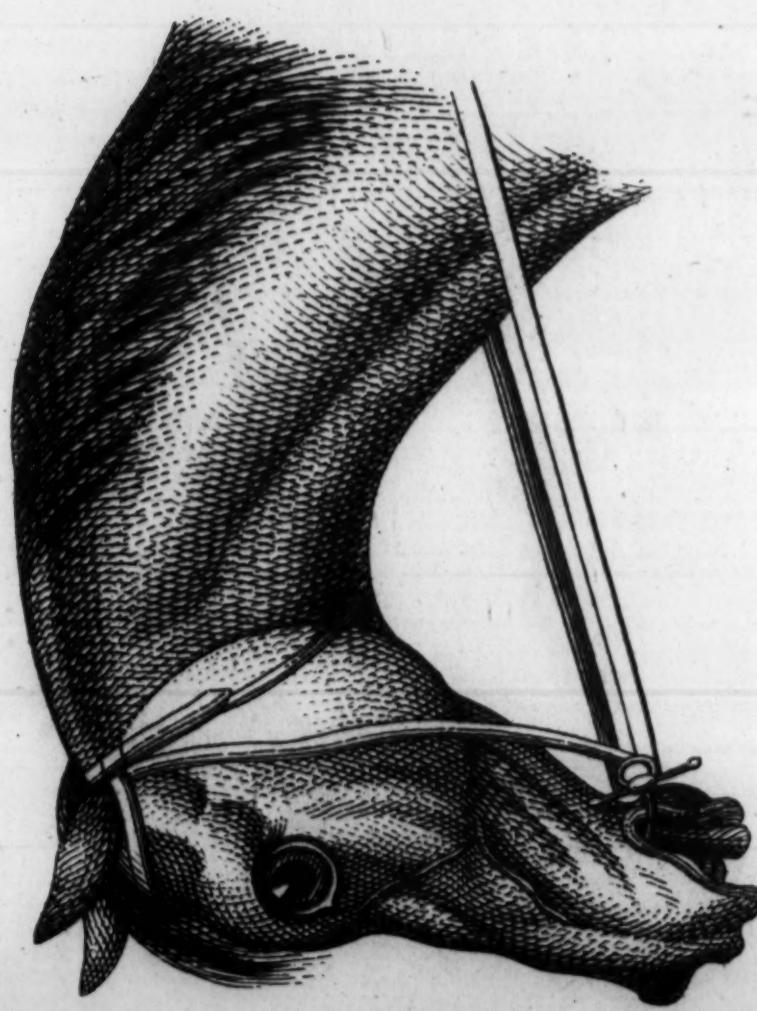
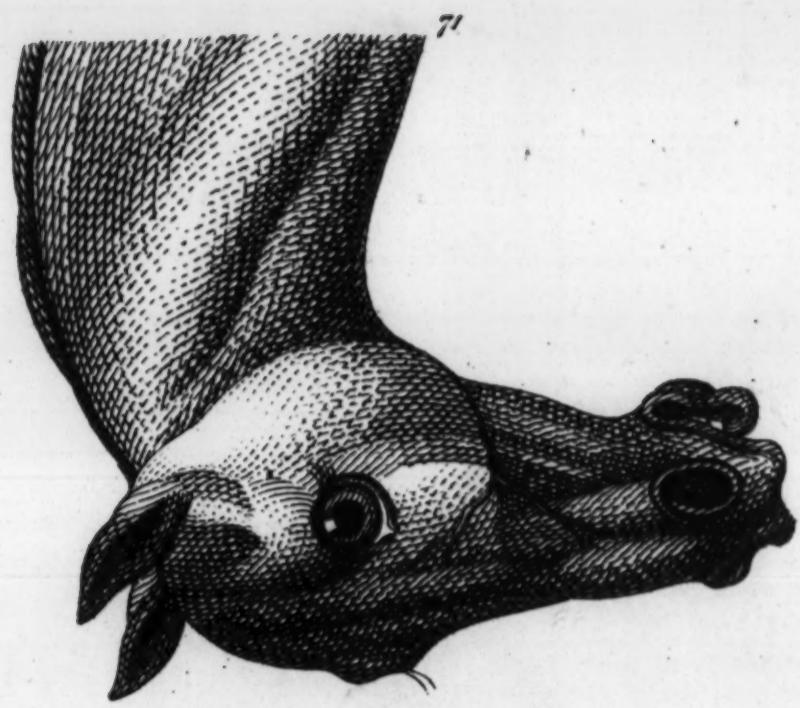






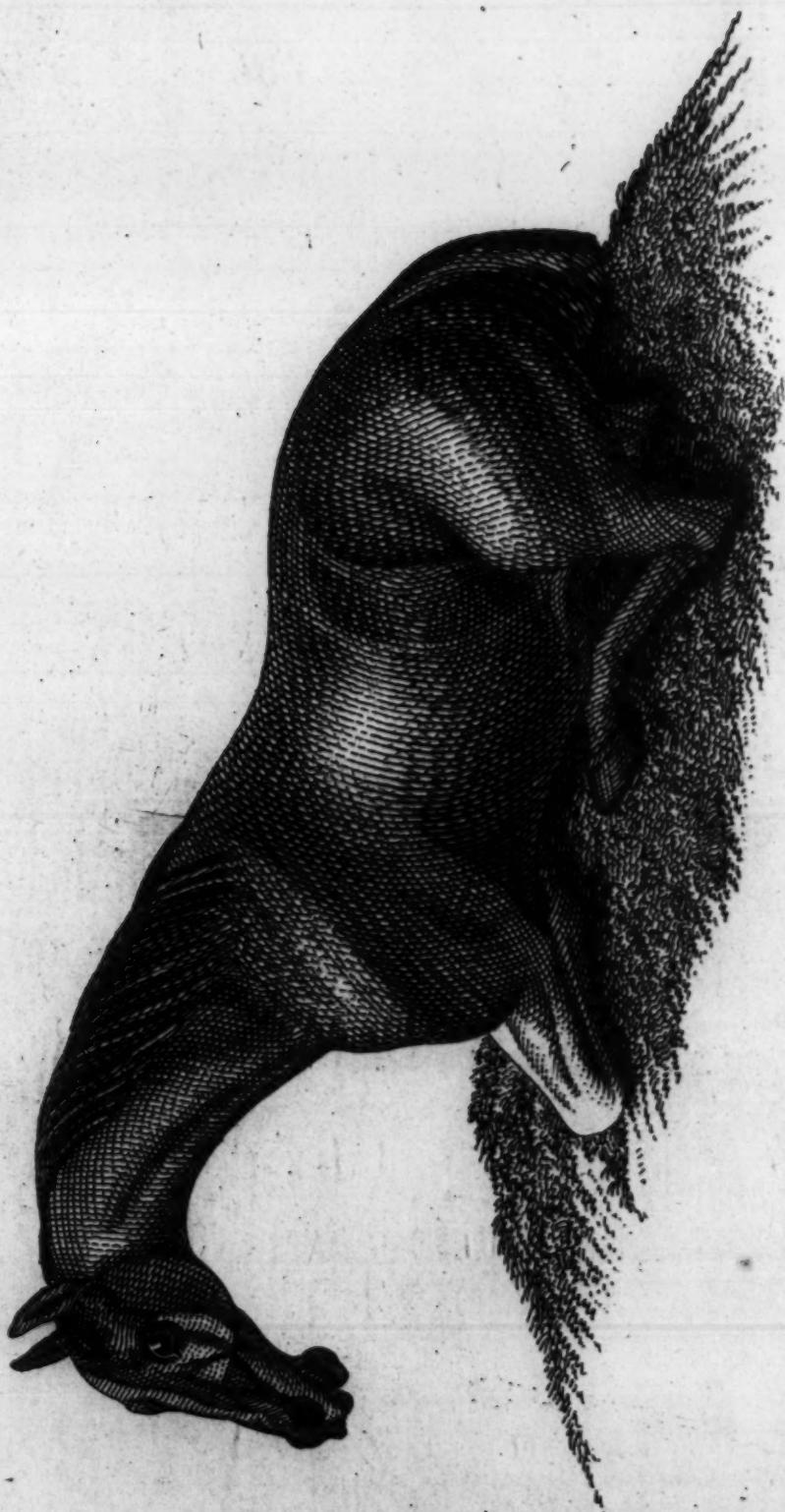
Linné Petrus de St. Petersburg.





Zimmer Roberts Inst p[ro]p[ri]et.





James Roberts Esq. M.A. F.R.S.

